

# Owner's Manual



CLASSIC CAR CHIVE

Mr. Sbrocco

Key #

Customer identification card imprint



### Customer Identification Card

This is another feature of Volkswagen Service that adds to your convenience. Just present this Manual whenever you stop for service at your Authorized Volkswagen Dealer. Your Identification Card will quickly furnish the Service Adviser with your name and address and all pertinent vehicle data.

CLASSIC CAR ARCHIVE

# Volkswagen Owner's Manual

1968 Models

## Warranty Voucher

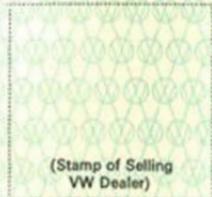
for the new VW automobile

Type: \_\_\_\_\_

Chassis No. \_\_\_\_\_

Engine No. \_\_\_\_\_

In accordance with the **terms of warranty** printed overleaf.



(Stamp of Selling  
VW Dealer)

The warranty commences at the date the VW automobile is delivered to the original purchaser,

viz. on \_\_\_\_\_  
(To be filled in by selling VW Dealer)

and covers a period of 24 months or the period before the vehicle has been driven 24,000 miles, whichever event shall first occur. Should any warranty claim arise, you are requested to submit this voucher to your VW Dealer.

VOLKSWAGEN OF AMERICA, INC.



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No warranties, express or implied, as to Volkswagen vehicles sold in the United States are made either by Volkswagen of America, Inc. or by the manufacturer or by the selling dealer, except the following warranty by Volkswagen of America, Inc.

## Warranty for new Volkswagen vehicles

This warranty is issued by Volkswagen of America, Inc. ("VWoA"), the authorized United States importer of Volkswagen vehicles.

**Free repair or replacement  
in United States and Canada  
of defective parts  
for 24 months or 24,000 miles**

1. VWoA warrants that every Volkswagen vehicle imported by VWoA and sold as a new vehicle to a retail customer by an authorized United States Volkswagen dealer will be free from defects in material and workmanship under normal use and service for 24 months after the date of delivery of the vehicle to the original retail customer or until the vehicle has been driven 24,000 miles, whichever comes first. This warranty is limited, however, to the following: If any part of the vehicle becomes defective during this period under normal use and service and the vehicle is brought to the workshop of any authorized Volkswagen dealer in the continental United States, Hawaii or Canada, the dealer will, without charge, either repair the defective part or replace it with a new or factory reconditioned part.

**Maintenance and validation  
by owner required to keep  
warranty in effect**

2. In order to keep this warranty in effect, the owner must do two things:  
FIRST: The owner must have the vehicle maintained and serviced as prescribed in the Volkswagen Maintenance Schedule. (See page 56.)  
SECOND: Every twelve months during the warranty period the owner must obtain from an authorized United States Volkswagen dealer a Validation Stamp on the Maintenance Card to show that the vehicle has been maintained and serviced in accordance with the Volkswagen Maintenance Schedule. Validation will be made upon presentation of bills or other evidence sufficient to satisfy the dealer that the required service and maintenance have been performed. The validated Maintenance Card must be submitted whenever a claim is made under this warranty.

**Items not covered by warranty**

3. VWoA's warranty does not cover:  
(i) Defects, damage or deterioration due to normal use, wear and tear or exposure; (ii) normal maintenance services, such as fuel system cleaning and wheel, brake or clutch adjustments; (iii) the replacement of service items, as, for instance, spark plugs, ignition points, V-belts, wiper blades or brake and clutch linings; (iv) deterioration of upholstery, soft trim and appearance items; (v) damage or defects due to misuse, alteration, negligence or accident; and (vi) damage or defects due to the repair of the vehicle by someone other than an authorized Volkswagen dealer or the installation of parts other than genuine Volkswagen parts.

**Warranty outside United States and Canada**

4. If the vehicle is brought to an authorized Volkswagen workshop outside the continental United States, Hawaii or Canada, VWoA's warranty will not be applicable, and defective parts will be repaired or replaced free of charge with new or factory reconditioned parts only within the terms and limitations of the warranty for new Volkswagen vehicles in effect in the country where such authorized Volkswagen workshop is located.

**No other warranties made**

5. **This warranty is in lieu of all other express or implied warranties of VWoA, the manufacturer and the selling dealer, including any implied warranty of merchantability or fitness for any particular purpose. Neither VWoA nor the manufacturer assumes, or authorizes any person to assume, on its behalf, any other obligation or liability.**

**Let us explain the warranty . . .**

Volkswagen of America, Inc. is proud of the quality of automobiles it imports. It warrants new vehicles for a period of 2 years or 24,000 miles from the date of purchase, whichever comes first. In general the complete vehicle including battery and tires is covered under the provisions of the Volkswagen New Vehicle Warranty. It will be honored by any Authorized Volkswagen Dealer in all 50 States, the District of Columbia and Canada.

This warranty is transferable if the ownership of the vehicle changes within the above period.

In order to keep the warranty in force, you as the owner of the vehicle have certain responsibilities. It is important that the vehicle be maintained properly. To facilitate record keeping, this booklet provides on pages 56 to 58 space for listing maintenance services and oil changes as they are performed. **Maintenance services should be performed by Authorized Volkswagen Dealers. They offer with their factory-trained Volkswagen mechanics and special tools, fast, efficient service in accordance with Volkswagen quality standards.**

Validation is a requirement of the Volkswagen New Vehicle Warranty. One year after the date of delivery, the warranty must be validated for the second year. This can be done at any Authorized Volkswagen Dealership in the USA or Canada. For that purpose, you should present to the Authorized Volkswagen Dealer the maintenance record for your vehicle. Provided that maintenance services and oil changes were performed in accordance with Volkswagen specifications, dated bills of other than Authorized Volkswagen Dealers will be accepted as proof that these services were performed on time.

Not all repairs, adjustments and replacements, however, are the result of defects in material or workmanship. There are other circumstances beyond the control of the manufacturer that might make a workshop visit necessary. These depend mainly on where you drive and how you drive. They would include weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage.

**For example, you are required to pay for the following:**

**Maintenance services and oil changes**

**Wheel alignment and wheel balancing** – the frequency of such services depends on driving conditions such as rapid starts and stops, tire skidding, hitting pot holes and curbs, etc.

**Mechanical adjustments** – including brake, clutch, door locks are required as a matter of normal operation of a motor vehicle. This protects you against early or expensive replacements.

**Brake and clutch linings** – are directly affected by driving habits and use. The replacement of these linings and the reconditioning of brake drums should be performed whenever necessary.

**Spark plugs and ignition points** – are subject to wear. Periodic replacements ensure you of maximum engine performance and gasoline economy.

**Wiper blades** – life expectancy will vary widely depending on climatic conditions and extent of use. You are the best judge to decide when they should be replaced.

**Light bulbs and fuses** – are service items.

**Paint, chrome, convertible top, trim and other appearance items** – are affected by normal wear and exposure. Proper care of these items can add to their appearance and durability. (Imperfections are normally apparent during New Vehicle pre-delivery inspection. For your protection, please report any imperfection to your Dealer immediately after you notice it.)

**Tires and batteries** – are subject to wear. If there is a defect you pay only for the amount of use you have gotten. An adjustment for tires is based on the remaining tread depth, for batteries on time used based on 36 months of service. This is known as the pro-rata method of adjustment.

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All pictures are of the Volkswagen DeLuxe Sedan with four speed synchromesh transmission. The text in the Owner's Manual is based on this vehicle. Where the controls, equipment and technical data of the Automatic Stickshift and Convertible differ considerably, attention is drawn to the difference.

Specifications are subject to alterations without notice.

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This sticker assures you that your 1969 Volkswagen complies with all US Motor Vehicle Safety Standards which were in effect at the time when the vehicle was produced.

**Volkswagenwerk AG**  
certifies to the dealer that this  
vehicle conforms to all US federal  
motor vehicle safety standards  
applicable at time of manufacture.



The tires of your Volkswagen conform to the US Motor Vehicle Safety Standards. When purchasing replacement tires make sure that they show the same specifications for tire size, load carrying capacity etc.

## Getting acquainted

### It is advisable

to read this Owner's Manual carefully. You will then get to know your new car quickly and will be able to start off on your trip with complete confidence. You will notice, your Volkswagen has many features designed with your safety in mind.

The first part of this manual deals with the operation of your Volkswagen. Everything about winter driving, tips on care of the vehicle and numerous points on carrying out small repairs and adjustments are given in the second half. It further contains information on lubrication and maintenance, and some interesting technical data.

Additionally, this book contains the warranty voucher and the terms of warranty as well as a punchcard for the free-of-charge maintenance service and a maintenance schedule. An easy-to-use maintenance record provides a stamping field, so you can tell at a glance when a maintenance service is due. The stamps in the squares show that the oil changes and maintenance services have been carried out regularly.

### Only one key

is required to open the doors and start the engine. Be sure the key number is recorded in the front of the manual. If you should lose the key, you can obtain a replacement from your Authorized Volkswagen Dealer.



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## Sit down and make yourself comfortable

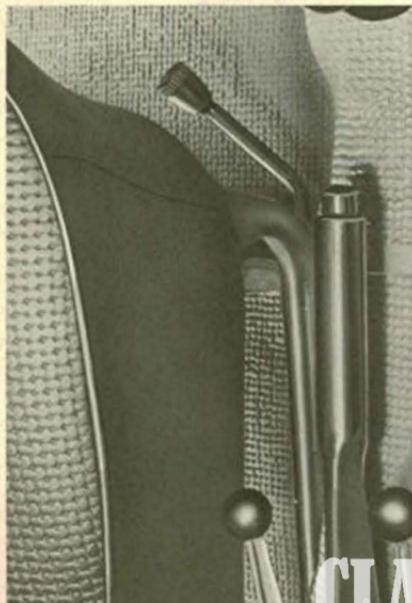
When driving, you must be comfortable. That is why the Volkswagen has separate front seats which are built so that you can alter seat position and backrest rake to suit your requirements. This is quite simple – just lift the lever at the front right hand side of the seat and slide the seat forward or backward. After adjusting, be sure the seat is securely locked in position.

The backrest angle can also be set to four different angles by turning the lever. Try them out until you find the angle which suits you best.

As a safety feature, the backrests of your Volkswagen are secured against tilting for-

ward. To release the lock, just pull the knob on the side of the backrest upward.

To take the seats out, unhook the coil spring underneath the seats, press down the leaf spring on the right runners and slide seats to the front.



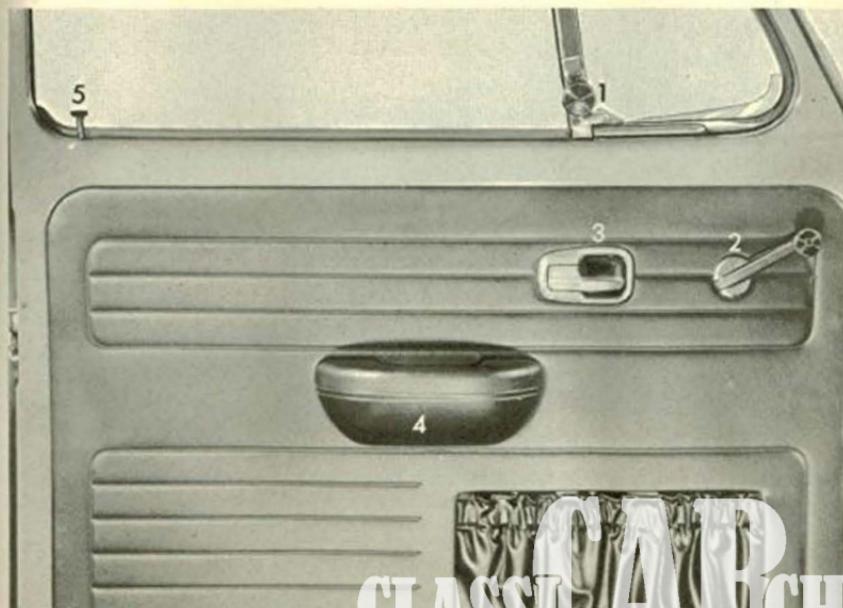
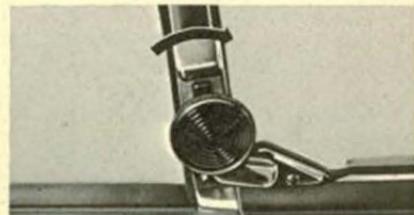
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## The doors . . .

can be closed more easily if a window is opened slightly.

### 1 – Vent wing fastener

To open the vent wing, turn knob of vent wing fastener until locking catch points in driving direction and push knob of vent wing fastener forward.



### 2 – Window crank

### 3 – Inside door handle

### 4 – Armrest and door closing grip

### 5 – Locking knob

The doors cannot be opened from inside or outside unless the locking knobs are raised.

When leaving the vehicle, just press the locking knob down and pull the trigger in the outer handle as you close the door. The vehicle is then locked.

If the door closes by itself after the locking knob has been depressed, it will not lock because the locking knob will spring up automatically. This is an additional safety measure to prevent you from being locked out if the door should slam shut while the key is still inside the vehicle.

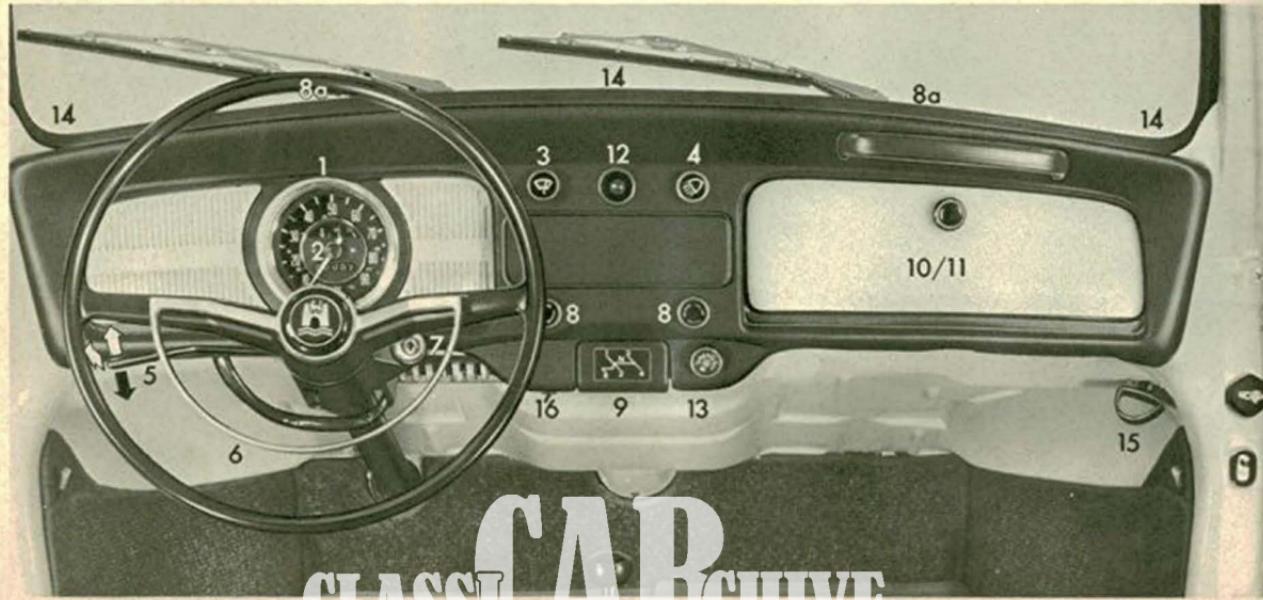
## In front of you - the instrument panel

Even if it is not your first Volkswagen, just have a quick look at the dash and try out the various knobs and levers with the ignition switched on:

### 1 - Speedometer

The following warning lights are in the speedometer dial:

- a - red - oil pressure
- b - red - generator and cooling
- c - blue - headlight high beam
- d - green arrows - turn signals
- e - red - temperature
- f - green - Automatic Stickshift
- g - - rear window defogger



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## 2 – Fuel gauge

The fuel gauge is located in the speedometer dial. When the needle is on line "R", there is about 1 gallon of fuel left in the tank – time to refuel at the next opportunity.

## 3 – Windshield wipers and windshield washer system

The two-speed wipers are controlled by turning the switch. They park automatically when switched off. The button in the switch knob controls the windshield washer.

## 4 – Light switch

Pull the knob out to the first stop to switch on the parking, license plate, tail and instrument lights. Pulling the knob out to the next stop, switches the headlights on.

**The brightness of the instrument lights**  
can be adjusted by turning the lightswitch knob.

## 5 – Turn signal switch

Lever up – right turn signal  
Lever down – left turn signal

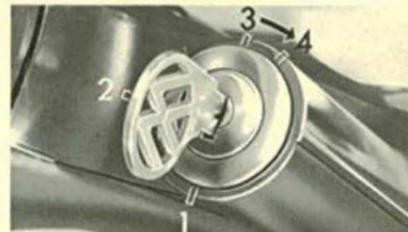
The turn signals are cancelled automatically upon completion of a turn.

Pull the lever toward steering wheel to **raise or lower headlight beams**. A blue warning light in the speedometer dial shows when the headlight high beams are switched on.

## 6 – Horn ring

## 7 – Steering/ignition lock

- 1 – Ignition off – Steering locked
- 2 – Ignition off – Steering free
- 3 – Ignition on
- 4 – To start



### Important

Remove key from lock only when vehicle is stationary.

## 8 – Fresh air ventilation

The volume of fresh air coming from the vents – 8a – on top of the instrument panel can be controlled by turning knobs to the left or right.

Turn knobs to the left – increasing air flow

Turn knobs to the right – decreasing airflow

With the heating system switched on, warm air is also distributed through these vents allowing you to regulate the fresh and warm air mixture to your comfort.

## 9 – Ashtray

To remove ashtray, press leaf spring down and pull ashtray out.

## 10 – Glove compartment

To open turn knob to the left.

Inside the glove compartment is the release lever – 11 – for the front hood.

On the Convertible the glove compartment lid can be locked. This prevents access to luggage and spare wheel by unauthorized persons while the top is down.

## 11 – Release lever for front hood

To close the front hood, just press it down firmly until you hear it click.

## 12 – Warning light for dual circuit brakes

See explanation page 16.

## 13 – Emergency blinker switch

If the vehicle is disabled or parked under emergency conditions, pull the switch to make all four turn signals blink at once. A warning light in the switch knob blinks when the system is turned on.

## 14 – Defroster vents

## 15 – Release for fuel tank flap

## 16 – Switch for rear window defogger (Sedan only)

The rear window defogger is actuated by this switch after switching on the ignition. The green control lamp in the speedometer will light up when the system is in operation. After the rear window has been cleared, switch off the rear window defogger so as not to place an unnecessary drain on the battery.

## Above the windshield

### 1 – Sun visors

You can lift the visors out of the center mounting and swing them toward the door windows to prevent glare from the sides. On the Four Seater Convertible the right hand sun visor incorporates a vanity mirror.

### 2 – Rear view mirrors

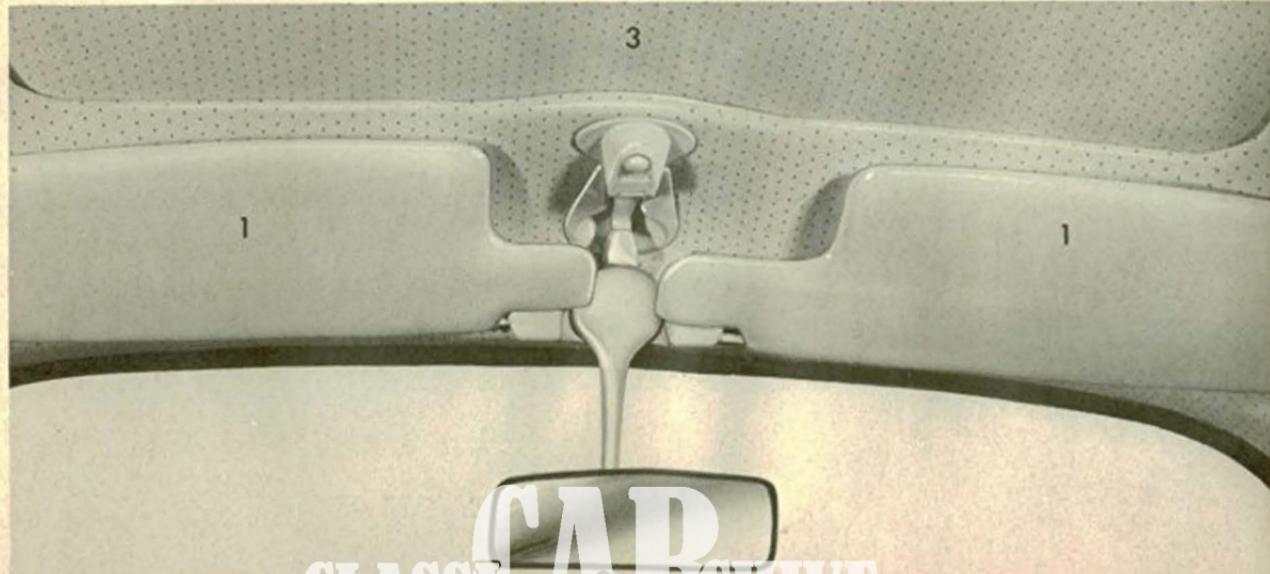
Outside and inside mirrors are adjustable so

that they can be set to give clear vision to the rear at all times. The outside mirror is hinged to fold flat upon contacting anything. The inside rear view mirror is rimmed with plastic for safety and designed to detach upon impact. It is equipped with an antiglare provision and can be adjusted at the lower portion of the mirror. On the Convertible, the height of the inside mirror can be altered by turning it 180° so that

you can see to the rear properly when the top is open.

### 3 – Sliding roof (optional equipment)

For safety reasons, the sliding roof crank should always be in the recess. When closing the roof turn the crank as far as it will go, then turn it back slightly until it can be folded into the recess.



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## In the footwell and between front seats

### 1 – Clutch pedal

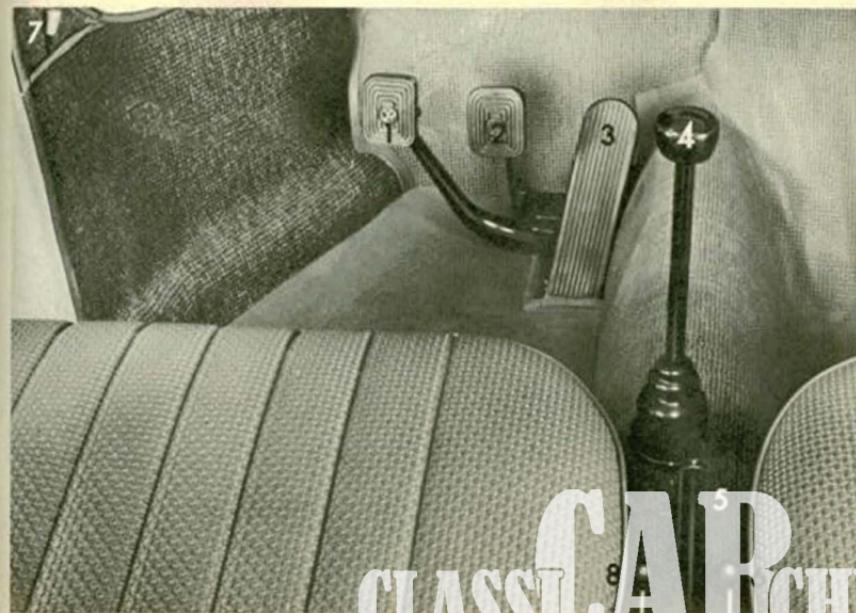
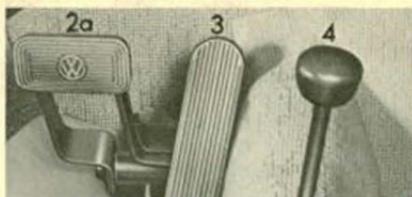
(Four speed synchromesh transmission only)

### 2 – Brake pedal

Vehicles with four speed synchromesh transmission.

### 2a – Brake pedal

Vehicles with Automatic Stickshift.



### 3 – Accelerator pedal

### 4 – Gearshift lever

Detailed instructions on Automatic Stickshift are given on page 20.

### 5 – Handbrake

To release the handbrake, pull the lever up slightly first and press the locking knob.

### 6 – Heating control lever

Lever up – heat on

Lever down – heat off

The heating will be more effective if you open one of the vent wings slightly because the fan can then force the warm air into the body interior more easily.

### 7 – Control lever for heating in front footwell

The flow of warm air into the front footwell can be controlled separately on each side.

Push lever forward – open

Push lever backward – closed

### 8 – Control lever for heating in rear footwell

This lever controls the flow of warm air into the rear footwell when the heating is on.

Lever up – rear seat heat on

Lever down – rear seat heat off

At low temperatures it is advisable to leave the rear outlets closed when first moving off. This increases the flow of air to the windshield to prevent steaming up when humidity is high. As soon as the windshield is clear, the rear footwell outlets should be opened so that the interior of the body heats up as quickly and uniformly as possible.

## Behind you

### 1 – Throwout windows

Optional rear opening throwout windows increase the ventilation of your Volkswagen. To open, loosen locking knob, pull knob to the front and outward.



### 2 – Rear luggage compartment

The rear luggage compartment is readily accessible if you fold the rear backrest down. To do this, simply pull the strap on the left hand side of the back rest releasing the safety catch. After folding back again, the back rest is automatically locked in place.

If you wish to carry extra large pieces of luggage in the sedan, you can strap the rear backrest down by hooking the hold down strap to the seat support and so increase the size of the rear luggage compartment.

### 3 – Interior light

Switch positions:

- Up – Light on only when doors are open
- Center – Light off
- Down – Light on

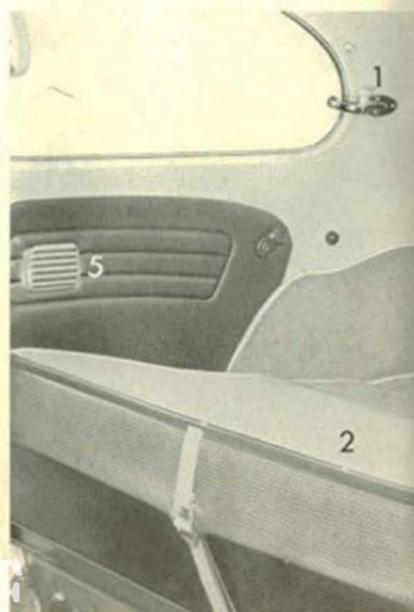
On the Convertible the interior light is fitted in the mirror bracket between the two sun visors. The switch positions are:

- Right – Light on
- Center – Light off
- Left – Light on only when doors are open

### 4 – Assist straps and coat hooks

### 5 – Ashtray

To remove ashtray, press it down lightly and lift out. To put it back, insert the ashtray at the top first, then push it in.



## Seat Belts

Each seat in your Volkswagen is equipped with a seat belt. Occupants of the vehicle should wear the belts at all times.

Shoulder belts should not be worn by persons less than approximately 55 inch in height.



### The front seats

Each front seat is equipped with a combination lap/shoulder belt that is completely adjustable to fit different size people and to allow for seat and backrest adjustment. When not in use, the lap section of the belt retracts and the belt should be hung on the hook on the door post by means of the hole in the buckle tongue. This prevents the belt end from lying about, getting dirty and permits easy entrance and exit for the rear seat.

**Operation:** After sitting down and adjusting the seat and backrest positions, pull the belt buckle across in front of you to the center of the car. Insert the buckle tongue into the opening in the housing on the center tunnel and press it in lightly. A click will be heard when the buckle locks. Be sure the belt is not twisted. Pull lap belt through buckle until belt is completely unrolled from retractor and belt fits snugly across lap. Take up any slack by moving slide. Adjust shoulder belt by pulling belt until it fits snugly across chest. Take up any slack by moving slide. To lengthen either section of the belt, release buckle from housing, hold buckle at a right angle to belt and pull belt through buckle. No further adjustment should be necessary if the same person uses the seat belt each time.

To release the belt, pull the unlocking lever on the tunnel housing upward. Only a light pull and a small movement of the lever is necessary.



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#### **The rear seats**

Each rear seat is equipped with an adjustable lap belt.

**Operation:** After sitting down and making yourself comfortable, pull the longer section of the belt across in front of you until the buckles meet. Insert the tongue of the outboard buckle into the recess in the inboard buckle and press lightly together. A click will be heard when the buckles interlock. Be sure the belt is not twisted. Pull belt through the buckle until belt fits snugly across the pelvic area. Take up any slack by moving the slide. To lengthen the belt release buckle, hold buckle on longer section at a right angle to belt and pull belt through buckle. No further adjustment should be necessary if the same person uses the seat belt each time.

To release the belt, pull the unlocking lever on the inboard buckle. Only a light pull and a small movement of the lever is necessary.

#### **Each seat**

is also equipped with a third mounting point to facilitate subsequent installation of combination lap/shoulder belts.

**Do not strap in more than one person with each belt.**

**Cleaning:** To keep belts clean, wash belts with mild detergent without removing from vehicle. Dry belts in the shade and do not allow lap belts to retract until completely dry. Do not bleach or dye the belts or use any other material to clean the belts because some of these agents can weaken the webbing.

Check buckles, retractors, and fittings periodically to make sure they function correctly and belts to ensure that the webbing has not been damaged.

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## In the front luggage compartment

Whether you are taking a lot of luggage with you or not, load the front luggage compartment first, using the heaviest pieces of luggage if possible. The correct distribution of load means the best road holding, so take advantage of the possibilities offered by the Volkswagen with its two luggage compartments.

**The front hood** is opened by pulling the lever on the left inside the glove compartment. The front hood opens partially and can be opened fully by pressing the knob in the hood handle. To close the front hood, just press it down firmly until you hear a click.



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### 1 – Tools

In the tool bag you will find:

- 1 fan belt
- 1 hub cap remover
- 1 pair of combination pliers
- 1 screwdriver with reversible blade for slotted and Phillips screws
- 1 open-end wrench 8 mm/13 mm
- 1 socket for plugs, fan pulley and wheel bolts
- 1 socket wrench 13 mm
- 1 bar for socket wrenches (also used to operate the jack)

### 2 – Jack

Operation of the jack is described together with wheel changing on page 29.

### 3 – Spare wheel

It also serves as an air supply for the windshield washer container, therefore, the spare tire pressure should occasionally be checked and inflated to 43 p.s.i. The air flow from the spare tire to the washer container will be interrupted if the tire pressure ever falls below 26 p.s.i. This is done automatically by means of the filler cap valve. As a result, the spare tire will always have the required pressure should it be needed.

#### **4 – Container for windshield washer**

As soon as the filler cap of the container is opened, the air supply from the spare tire to the windshield washer container is interrupted by means of a valve in the filler cap. The washer container can be filled completely with washer fluid. It is advisable to add a cleaning solution, such as Volkswagen's Windshield Washer Anti-Freeze and Solvent, to the water as clear water alone is usually not adequate to ensure that the windshield is cleaned quickly and properly.

Follow the directions on the container for the amount to be used.

After filling container ensure that the filler cap is always screwed on tightly.

#### **5 – Brake fluid reservoir**

The brake fluid level should always be above the protruding edge near the top of the container. If the brake fluid level ever falls below this edge, the complete brake system should be thoroughly examined by your Authorized VW Dealer.

**Brake fluid** is water absorbent and should, therefore, be **renewed every 2 years** by an Authorized VW Dealer.

**Now you know your vehicle fairly well.**

**Further hints on what to do before driving off and when on the move are given on pages 16 to 21.**

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If you are a Convertible owner you should read the following page first.

## When the sun is shining . . .

you can open the Convertible top without effort, but only open it when it is dry and clean because sharp particles of dirt will damage the material.



First, release the locking levers for the top above the front vent windows and fold top backwards. Pull top cover and padding towards the rear and out of the linkage. Clear headliner from linkage so that it does not get jammed. Push the locking catches down. Before putting on the protective boot and securing it with the press buttons, press the top down lightly on

both sides until the small catches engage. When sliding on the protective cover, raise up top cover on both sides so that the top is completely covered by the boot as otherwise there will be friction marks.

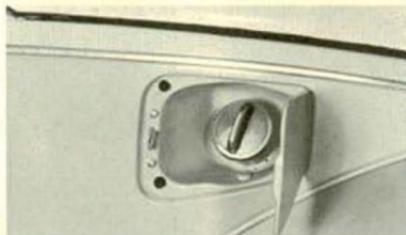
To close the top, take the protective boot off. Press the top down lightly so that the catches can be unhooked and pull the top forward.

From inside the car pull the top down to the windshield frame with the aid of the levers until the guide pins engage in the windshield frame. Then guide the hooks into the holes of the brackets on the windshield frame and set the levers.

One tip: As a last step, open and close the rear windows so that the weatherstrips are properly positioned.

## Before moving off, check . . .

the fuel, the brakes, the lights and, at regular intervals, the oil level in the engine and the tire inflation pressures.



### The fuel

in the tank, when full, is sufficient for 250-280 miles. The filler neck is located above the right front fender. The flap opens if you pull the release on the right hand side underneath the instrument panel.

The choice of fuel is left entirely to you. The Volkswagen will run satisfactorily on all gasolines which fulfill the octane requirements of the engine: (91 octane - Regular).

If regular fuels with adequate anti-knock qualities are not available, premium fuels should be used or mixed with the regular fuel.

### The brakes

should be checked before driving off. Your Volkswagen is equipped with a dual brake system. Both systems, front and rear, can function independently.

**An indicator lamp on the instrument panel** controls the brake systems. Should the indicator lamp light up while applying the brakes, see your Authorized VW Dealer as soon as possible because one of the two brake systems may have failed. The brakes will still operate, however, a longer distance is required to bring the vehicle to a halt.

Push indicator lamp after switching the ignition. If the lamp does not light up, the bulb should be replaced.

Please bear in mind that brakes are subject to wear. An increase in pedal travel will indicate this wear. Depending on individual operating conditions, the brakes may have to be adjusted between specified maintenance intervals.

### **The lights**

include headlights, back-up lights, tail lights, license plate light, turn signals and brake lights. The turn signals, brake lights and back-up lights must be checked with the ignition on.

If a turn signal is defective, the warning lamp in the speedometer dial flashes much faster than usual or goes out. The brake lights only work when the brake pedal is depressed, the back-up lights only when reverse gear is engaged.

### **The oil level**

should be between the two marks on the dipstick and must never be below the lower mark. Wipe the dipstick clean before checking.

The vehicle must be on a level surface when the oil level is checked so the dipstick reading will be accurate. Do not check the oil immediately after stopping the engine. Wait at least 5 minutes to give the oil in the engine time to drain down into the bottom of the crankcase.

To top up the oil level, a well known brand of oil should be selected. Although it is advisable to stick to one brand of oil, using a different brand to replenish the oil will not harm the engine. Details about the proper oil viscosities are given on page 41.

### **The correct tire pressure**

is most important in the interest of safety. Too low as well as too high a tire pressure reduces the life expectancy of the tires, and, furthermore, adversely affects the road holding of the vehicle. Although the tubeless tire of your car will hold the inflated tire pressure for a long time, you should check the pressure before you start out on a long trip or at least once a week.

The specified tire pressure can be found in the table on page 49 and also on the label inside the glove compartment lid.

### **Two more important points:**

1 - If the vehicle is used mostly in very dusty conditions, the oil bath air cleaner must be checked frequently, even daily if necessary. How this is done is described on page 45.

2 - Do not drive your car with a disconnected battery. This may lead to damage to the electronic components of the electrical equipment.



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## Starting the engine

Before turning the ignition key, make sure that the gearshift lever is in Neutral. Vehicles with Automatic Stickshift can be started in Neutral only.

**At temperatures above freezing point** or when the engine is still warm, depress the accelerator pedal slowly while operating the starter. When the engine is very warm, depress pedal fully but do not "pump" it.

**At temperatures below freezing point** or when engine is cold, depress the accelerator pedal fully once and then release it so that the automatic choke can work. Then switch ignition on and start immediately. When the weather is very cold, the engine may turn over slowly during starting. In this case depress the clutch while cranking; if it turns over faster, hold the clutch down until the engine starts. When starting without depressing the clutch, be sure the handbrake is on and the gearshift is in neutral.

As soon as the engine starts, release the ignition key so that the starter is switched off. Do not try to warm the engine up by letting it idle with the vehicle stationary — drive off immediately.

Do not race the engine while it is still cold.

If the engine does not start the first time or stalls at any time, the ignition will have to be switched off and then on again because the non-temper lock in the switch prevents the starter from being operated when the engine is running and thus being damaged.



**CLASSIC VOLKSWAGEN**

**The warning lights in the speedometer will come on when the ignition is switched on. As soon as the engine starts, these lights will go out. Stop at once if one of these lights comes on when driving:**

**Red warning light for generator and cooling**

Check the belt that drives the generator. If this belt breaks, the engine cooling fan also stops working. The proper way to fit a new belt is described on page 30.

If the generator stops charging for any other reason, you can drive on but try to get the vehicle to an Authorized Volkswagen Dealer as soon as possible because the battery will soon run down.

**Green warning light for oil pressure**

If this warning light comes on when driving the flow of lubrication oil in the engine may be interrupted. Check the oil level first. Should the cause of the trouble be elsewhere, contact your nearest Authorized Volkswagen Dealer.

**Be careful when running the engine in confined spaces. Ensure that there is ample ventilation so that the poisonous exhaust gases can escape.**

## ... it runs . . . and runs . . . and runs

You can drive your Volkswagen at full speed from the first day. There are, however, certain permissible speed ranges for the various gears:

1st gear:	0-15 mph
2nd gear:	10-35 mph
3rd gear:	18-55 mph
4th gear:	30 mph and up

When a particular traffic situation makes it essential to move rapidly, you can accelerate up to 37 mph in 2nd gear and up to 58 mph

in 3rd gear for brief periods only. Bear in mind, however, that full throttle acceleration raises fuel consumption considerably. It is more economical to drive smoothly and keep the top speed fairly constant. Very fast, racy-sporty driving, alternating between full throttle and hard braking will mean more frequent visits to a gas station and increased tire and brake lining wear.

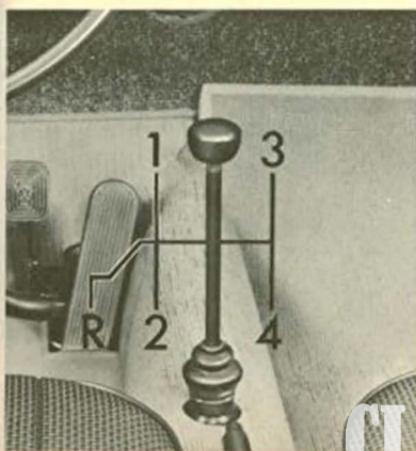
You can drive very economically between:

- 10 and 22 mph in 2nd gear
- 18 and 34 mph in 3rd gear
- 30 and 60 mph in 4th gear

Just a few words about the clutch while we are on the subject of driving. The clutch is a very hard-worked part of the vehicle. A good driver slips the clutch as little as possible when taking off and changing gears. He always depresses the clutch fully when shifting, he changes down into the appropriate gear in city traffic instead of slipping the clutch, and never uses the clutch pedal as a "rest" for his left foot.

Shift into reverse gear only when the vehicle is standing still. Reverse gear is fitted with a lock so that it cannot be engaged unintentionally. To engage reverse, press the lever down, move it over to the left and pull it back to the stop.

Volkswagen automobiles have excellent brakes which can stop the vehicles in the shortest possible distance. But do not forget that the



braking distance increases very rapidly as the speed increases. At 60 mph for example, it is four times longer than at 30 mph. Apply the brakes in time, but do not use too much force — locked wheels increase the braking distance.

Remember that water reduces the tire adhesion and increase breaking distance. Drive carefully and remain at a safe distance behind the preceding vehicle, particularly when roads are wet and slippery.

Always set the handbrake after parking your car. On steep hills turn the front wheels toward the curb.

**That just about covers the operating of the car and how to drive it properly. From page 22 on you find the tips for winter driving, breakdowns and all there is worth knowing about the lubrication and maintenance of the vehicle.**

**Before driving a vehicle with Automatic Stickshift be sure to read the following pages:**

# VW-Automatic Stickshift

## At first Glance

you will notice the lack of a clutch pedal. Driving with the Automatic Stickshift is simpler and shifting easier. We suggest you carefully read the following instructions to familiarize yourself with the operation of the transmission.

## The Automatic Stickshift

transmission consists of a torque converter, a power-operated clutch for shifting, and a mechanical threespeed transmission. The torque converter multiplies the torque produced by the engine and allows the vehicle to be driven with very little shifting — normally only two driving ranges will be used. It automatically changes the torque from the engine in an infinitely variable ratio according to driving conditions. Since the torque converter is a fluid coupling, it also permits the vehicle to be stopped while the engine is running. The clutch interrupts the flow of power from the engine to permit the gears in the transmission to be shifted. Because the power-operated clutch is actuated by the first slight movement of the gearshift lever, there is no need for a clutch pedal.

## Driving ranges

Your Automatic Stickshift has three forward driving ranges and one reverse. They have been designed so that you will very quickly know which range to use to produce the best performance under all driving conditions.

## Neutral

is between all gears in the H-pattern. Neutral is the only range that completely interrupts the flow of power to the rear wheels. It should be used when the car is standing at idle for any length of time, with the hand brake set. Neutral is also the only range in which the engine may be started.

## Starting

With the hand brake set, move the shift lever to Neutral and start the engine. Move the shift lever into the range you wish to use, normally Range 1, and then release the hand brake. It is important to release the brake after shifting because, under certain conditions, the vehicle may creep when a driving range is selected. After shifting, be sure to remove your hand from the gearshift lever to allow the clutch to engage.

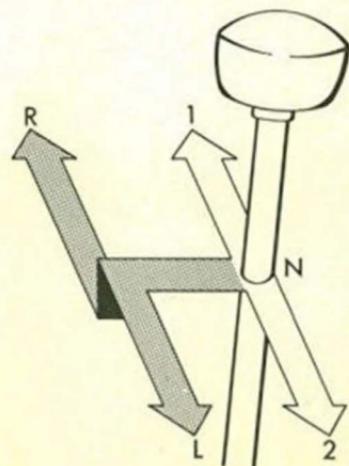
## Low Range

or the load range is not normally used in day to day driving. It is only used to get the car moving on steep slopes with a full load or when descending a very steep hill to take advantage of the additional engine braking. Low is also recommended for particularly slow driving over rough ground. Speeds from 0-35 mph can be obtained in this range.

## Driving Range 1

is for starting and accelerating, and covers the speed range from 0-35 mph. Under normal

driving conditions, the vehicle is started in this range before shifting to Range 2. Range 1 is also recommended for use in city traffic, slow moving lines of vehicles and whenever maximum acceleration is required for passing. If the vehicle is in Range 2, you may downshift into Range 1 at any speed under 55 mph.



## Driving Range 2

is the range that should normally be used for highway driving. While this range may be used at any speed from 0-top speed, it is the only range that can be used above 55 mph. At low speeds, however, it is better to use Range 1 to take advantage of its better acceleration.

## The Reverse Range

should only be engaged when the vehicle is standing still. The gearshift lever must be depressed to get past the safety stop to shift into Reverse.

## Shifting

is easy. Simply release the accelerator pedal and move the gearshift lever from the range you are in to the range you want, remove your hand from the gearshift lever, and again step on the accelerator.

## If you like quiet, smooth driving.

which saves fuel, we recommend that you shift to Range 2 soon after starting off at about 20 to 25 mph.

## If you want to drive fast

and want maximum acceleration, you can stay in Range 1 right up to 55 mph and then shift into Range 2. Naturally, this will use more gasoline.

## Driving downhill

If you make full use of the braking power of the engine, just select a lower driving range as with a conventional transmission. When parking in tight spaces, it is advisable to use the driving ranges Reverse and Low. Shift into Reverse only when the vehicle is stopped.

## Warning light in speedometer

There is a red warning light in the right hand side of the speedometer dial (see page 7). If the light ever goes on, it indicates that the ATF (Automatic Transmission Fluid) has reached too high a temperature. If you drive for a longer time under heavy load conditions, such as when pulling a trailer up a hill, and the warning light goes on, shift to a lower driving range. However, if the car is loaded so heavily that it barely moves or does not move at all, shift to a lower gear immediately without waiting for the warning light to go on.

## Stopping

Release the accelerator and apply brake. If you are going to start off again in another range, you may shift into the new range while the vehicle is standing still, but if you remain in a driving range, apply the foot or hand brake to prevent the vehicle from creeping.

## Towing

It is possible to tow a trailer or another vehicle with the Automatic Stickshift. However, it is better to start in the Low driving range with this extra load. When climbing or descending steep hills, shift to a low range early.

## Push starting

If the engine should ever fail to start, the low driving range should be used in such instances and the vehicle moved at a minimum speed of 15 mph.

For further hints about towing and pushing see page 37.

## Some basic rules

1. When parking, apply the hand brake.
2. When idling for an extended period of time, shift into Neutral and apply the hand brake. When stopped in traffic, apply either the hand or foot brake to prevent creep.
3. When starting out, shift into a driving range before releasing the hand brake.
4. After shifting, remove your hand from the gearshift lever. Do not try to drive with your hand resting on the lever.

## An 8 Amp. fuse

In a fuse holder above the ignition coil protects the control valve of the Automatic Stickshift. If this fuse should ever burn out, the transmission cannot be shifted.

## When it snows and freezes

Your car has two features which you will appreciate in the winter: Air cooling and heating. You can leave your car out in the bitter cold without fear — the aircooled engine will always start readily and supply warm air for the interior of the body.

Do not, under any circumstances, try to influence the heating of the vehicle by covering up the slots below the rear window. These slots must always be clear so that air can flow into the carburetor and to the engine cooling fan.

**Tires** with badly worn treads are very dangerous, particularly in the winter, so ensure that they are replaced in time.

M+S tires with special heavy treads give good traction in snow and slush. They can be fitted to all four wheels but never use them on the front wheels only.

Better still are M+S tires with spikes which increase the safety margin even on hard snow and ice. These tires should always be fitted on all four wheels. Check your state laws before using spiked tires.

If M+S tires are mounted, they should have the same ply rating (PR) as tires of the original equipment.

The specific characteristics of winter tires can be improved by raising the tire pressures to 3 psi (0.2 kg/cm<sup>2</sup>) above the normal operating pressure for the tire concerned. This inflation pressure than covers the recommended pressure increase of 3 psi for fast highway driving. M+S tires with spikes should be run at moderate speeds when new in order to give the spikes time to settle.

In general, winter tires only have real advantages when conditions on the road are really

wintery. For safety reasons, it is not advisable to drive a vehicle fitted with any type of winter tire at top speed. You cannot expect a winter tire to have the same degree of adhesion on dry, wet or snow-free roads as a normal tire. In addition, under these conditions, M+S tires wear rapidly, particularly at high speeds.

**Mud & Snow** tires do not fulfil their purpose if the tread depth is less than 5/32" (4 mm).

Radial ply tires are suitable all year round. If winter conditions are not too severe, they may very well replace conventional snow tires. Even more suitable for operation of the vehicle during the winter season are radial ply Mud & Snow and tires with spikes.

An increased tire pressure of 3 psi (0.2 kg/cm<sup>2</sup>) applies to these tires also.

**Snow chains** can be fitted to the rear wheels only. Only thin chains which do not protrude from the tire tread and inner side wall more than  $\frac{1}{8}$  inch including tensioner, are suitable. When driving over long stretches of road which are free of snow, the chains should be removed because they serve no useful purpose and merely damage the tires and wear out quickly.

**Engine oil** of SAE 30 grade will tend to thicken at temperatures around freezing point and may cause difficult starting. As soon as winter temperatures are expected, change to a thinner grade of engine oil. Details of the various oils to be used are given on page 41. If you drive mostly short distances and in city traffic, especially in the winter, we recommend that you have the engine oil changed at shorter intervals, say every 1500 miles. At other times, these additional changes are unnecessary and uneconomical.

In countries with arctic climates and temperatures below about  $-13^{\circ}$  F, the engine oil should be changed every 750 miles.

**Transmission oil** of SAE 90 grade can generally be used all year round. Only in countries with arctic climates is it necessary to use the thinner SAE 80 transmission oil.

When the temperature is below  $-13^{\circ}$  F for long periods, it is advisable to use Automatic Transmission Fluid (ATF) in the transmission. The vehicle must only be run with this fluid during the cold period. As soon as the temperature rises to near freezing point, this fluid must be replaced by SAE 80 or SAE 90 transmission oil.

**The battery** not only tends to drop in capacity as the temperature drops, it also has to work much harder in the cold weather. Current consumption is higher when starting and the lights are on longer. A really cold battery which may not be fully charged has only a fraction of the capacity that a battery at normal temperature has, and this might not be enough to start a cold engine. If the car is only driven short distances and in city traffic, the battery may have to be charged from an external source from time to time. For more details see page 36.

**The spark plugs** should not have excessively large gaps especially in the winter. The gap is normally .028 in., but when the weather is very cold, the gap can be temporarily reduced to .020 in. to facilitate starting.

**Door locks** can freeze in winter if water gets into the lock when washing the vehicle, so do not aim the water jet directly at the locks. It is a good idea to cover the keyholes beforehand. A frozen lock can be opened by warming the key well before inserting it. An anti-freeze solution or glycerine should then be squirted into the lock cylinder as soon as possible.

**It is a good idea** to carry a shovel or a short-handled spade in the car to clear away snow if you get stuck. A small hand brush for sweeping snow off the vehicle and a plastic scraper for the windshield are also useful.

Ice on windows can be removed quickly by using Volkswagen's Spray De-Icer – Part No. ZVW 241113.

## A clean smart car looks better

We have provided your vehicle with enamel which is not only extremely durable and has a very high gloss, but which also has a long service life. This has been achieved by special chemical treatment of the body metal and the use of a synthetic resin enamel paint technique.

But even the finest paint requires a certain amount of care. This is easy to appreciate if you consider for a moment the influences to which the paint is exposed. Sunlight, rain, industrial fumes, soot, dirt and dust are constantly attacking the paintwork.

In the winter all parts of the vehicle are subjected to even more severe climatic conditions and the effect of corrosive salt solutions. It is advisable to clean and wax the vehicle more frequently in this period.

Every Authorized Volkswagen Dealer stocks car cleaning materials. These materials have been tested by us and found to give the best results. The order numbers of these materials are given on page 26.

**Never wash, wax or polish the car in the sunshine. Before waxing and polishing, the vehicle must be washed and dried thoroughly.**

**Wash** a newly painted vehicle frequently with clear water particularly in the first two or three months as this will help to harden the paintwork. Use a soft sponge or hose brush for the body, a long handled brush for the wheels and plenty of water. Spray the body panel and wheels with a fine soft spray first to loosen the dirt, then start at the top and wash downward. Rinse the sponge out frequently to avoid scratching the paint.

Later on, the vehicle should always be washed when it is dirty. The longer the dirt is left on the paint the greater is the risk of it damaging the glossy finish. The dirt particles can have a chemical effect on the paint surface or they can cause scratches if rubbed into the paint. If the dirt cannot be removed with clear water, a suitable shampoo can be added to the water. Afterward, rinse all traces of the shampoo off with clear water and then wipe the vehicle dry to avoid water spots.

**Close fresh air ventilation system before washing the car.**

**Waxing** should be carried out for the first time after about 8 to 10 weeks. Waxing is a means of putting back into the paint certain substances which keep it flexible and are lost in the course of time due to weathering and washing, particularly when you use a detergent. The wax coating seals the pores of the paint and makes it water-repellent.

The paint should be re-waxed when water remains in large patches on the surface and does not form beads and roll off. Regular waxing will ensure that the paint retains its original high gloss for a long time.

Another way of waxing the paint is to use a wash-and-wax-solution. This is easier than waxing in the normal way. Just wash the vehicle first then put the wash-and-wax-solution in a bucket of water and apply it to the paintwork. All that remains is to leather off the paint until it is dry. This type of wax will only protect the paint adequately if it is used every time the vehicle is washed and the interval between washes is not more than two or three weeks.

**Polishing** should only be done when the paint has lost its gloss due to weathering or lack of proper care and the gloss can no longer be restored by waxing in the normal way. After treatment with polish, wax the paint thoroughly to retain the gloss which has been obtained.

**Minor paint damages**, such as scratches, stone chips and the like, can easily be touched up with a paint stick available at your Authorized VW Dealer.

In the spare tire compartment you will find a sticker beside the vehicle identification plate showing a number. This is the code number for the paint color of the vehicle.

**Tar spots** tend to penetrate into the paint in a very short time. They should be removed as soon as possible, preferably with a tar remover. Afterward, the area concerned should be washed with a solution of shampoo and water and rinsed well to remove all traces of tar remover.

**Insects** tend to stick on the front of the vehicle and on the windshield in the summertime. These should also be washed off the paint as soon as possible. When really dried on, the insects can be removed with an insect remover. Afterward, the paintwork should be washed, rinsed and wiped dry with a chamois.

**Parking under trees.** Vehicles which are parked under certain trees in the summer are often found to be covered with sticky spots. These spots can be taken off easily with a shampoo if the treatment is not delayed too long. It is advisable to wax the paint afterward.

**Chrome parts** should be treated with a chrome cleaner or polish. To give lasting protection in the winter, the chrome parts can be coated with Volkswagen's Chrome Cleaner and Protection.

**The windows** can be cleaned with a sponge and clear water. Always use a clean chamois to dry the windows. This chamois must not be used on the paintwork in any circumstances as most paint cleaners and polishes contain ingredients which will cause unpleasant streaks to appear on the windshield when it rains, even if only the smallest trace is present. These streaks can only be removed with a good windshield cleaner. Do not forget to clean the wiper blades.

**The windshield wiper blades** should be taken off from time to time and cleaned with a hard brush and alcohol or a strong detergent solution. During long dry periods they tend to get clogged with tar splashes, oil and insects. New blades should be fitted as often as necessary.

**The Convertible top** does not require any special care. It is important however, to clean the plastic material regularly. When very dirty, the top can be cleaned with a soap powder solution or Volkswagen's All Purpose Cleaner. A hard brush will help to remove dirt from the grained surface of the material but care must be taken at the edges to avoid scratching the paint with the bristles. After washing the top, the complete vehicle must be rinsed thoroughly with clear water.

Spots in the top material must never be removed with paint thinner, chlorine-based spot removers or similar solutions, as this will damage the material. Stubborn spots can be removed by wiping with a cloth moistened with benzine and then rinsing well with a lukewarm soap solution.

The pivot points of the top linkage should be cleaned occasionally and a few drops of oil applied. Afterward the joints should be wiped dry to ensure that oil does not drip on to the top material.

Noises caused by friction between the window frames of the Convertible and the rubber weatherstrips can be eliminated by rubbing in some talcum powder or silicone spray.

**The front seats.** If the front seats become hard to slide, the runners should be lubed lightly at top and bottom after being cleaned with a cloth. After unhooking the coil spring underneath the seats and pressing down the leaf springs on the right runners the seats can be slid forward out of the runners. When putting the seat back, do not forget to hook the spring in again.

**Door and window weatherstrips** must be undamaged and supple to ensure that they seal properly. To retain the original flexibility of the rubber, coat the weatherstrips with talcum powder or silicone spray occasionally.

## Car care materials for the Volkswagen

The items listed below will help you preserve the built-in beauty of your Volkswagen. Compounded especially for use on your VW, they are available at your local Authorized Volkswagen Dealer. Detailed instructions on how to use the various products are imprinted on the individual containers.

Application	Volkswagen Product
Car Washing, Convertible Top Cleaning, Upholstery Cleaning, Whitewall Tire Cleaning	All Purpose Cleaner – ZVW 243101
Paint Polishing and Paint Waxing	Combination Car Cleaner and Wax – ZVW 241109
Paint Polishing	Paint Polish – 000096001
Paint Waxing	Paint Preservative – 000096011
Care and Cleaning of Chrome Parts	Chrome Cleaner and Protection – 000096061
Windshield Cleaning	Windshield Washer Anti-Freeze & Solvent – ZVW 241101
Paint Touch up	Touch up Paint, all colors
Removing ice from windows	Spray De-Icer-ZVW 241113

**The cloth upholstery** should be cleaned with a vacuum cleaner or a fairly hard brush. Spots can usually be removed with a lukewarm soap solution. Grease and oil spots can be treated with spot remover. Do not pour the liquid on to the material as this will cause marks. Dampen a clean, plain cloth with the cleaner and remove the spot by rubbing with a circular movement and working inwards.

**The leatherette** parts of the headlining, side trim panels and seats can be cleaned best with a soft cloth or brush. When very dirty use Volkswagen's All Purpose Cleaner. Use only a dry foam cleaner on the leatherette of the seats and backrests because the material used for these parts is air-permeable and liquid cleaners would penetrate into the textile backing.

Grease or paint spots should be wiped off before they dry when possible. Once dry, they can be removed by rubbing carefully with a cloth moistened with benzine or alcohol. Shoe polish marks can be removed with turpentine but be careful because this will damage the dust repellent surface of the leatherette if allowed to work on it too long. After cleaning, rub the material dry with a soft cloth. So-called preservatives are not suitable for leatherette because they do not soak into the material and merely collect dust and make clothing dirty.

**Airing the body.** If the vehicle is left in the garage for long periods, the garage and car doors must be opened from time to time to prevent the formation of mold and damp stains inside the vehicle.

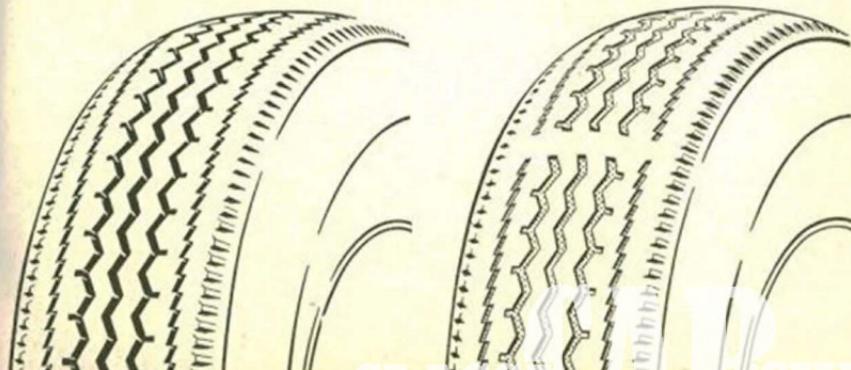
## Tires

In addition to checking pressures regularly and driving carefully, the following points should be remembered in connection with tires:

- 1 — Check tires for damage occasionally and remove imbedded material.
- 2 — Keep oil and gasoline away from the tires.
- 3 — Try not to expose tires to sunshine for long periods.
- 4 — Replace missing valve dust caps as soon as possible.

The original equipment tires on your Volkswagen incorporate built-in tread wear indicators to assist you in determining when your tires have been worn to the point of needing replacement. These indicators are molded into the bottom of the tread grooves and will appear as approximately  $\frac{1}{16}$  of an inch. When the indicators appear in two or more adjacent grooves, tire replacement due to tread wear is recommended.

We advise you however no to let the tires wear down to this extent as tires with treads in this condition cannot grip the road surface properly when driving at high speeds on wet roads. If you notice that the tires are wearing unevenly, get advice from your Authorized VW Dealer.



Tread still good

Tread worn out

CLASSIC ARCHIVE

## Just in case . . .

you have to carry out a repair yourself we have included some information on the next few pages which should help you.

All other repairs should always be performed by an Authorized Volkswagen Dealer. The Volkswagen service organization offers you a wide spread network of authorized dealers staffed by skilled mechanics and equipped with all the special tools and appliances required. Whenever you see the familiar VW sign on the roadside, you can be sure of expert advice and quick, efficient assistance.



### Wheel changing

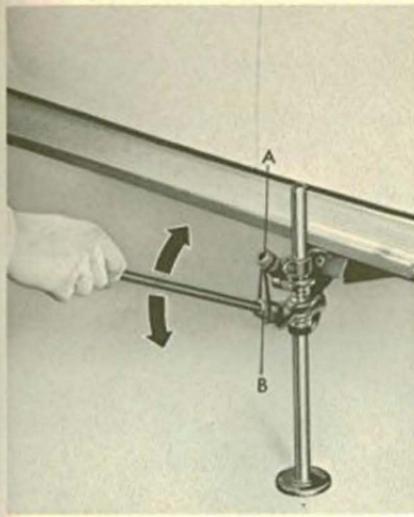
Before taking out the spare wheel, disconnect the hose leading to the valve of the spare wheel. Lift wheel so that you have better access to the wedges holding the washer container. After removing the wedges, the washer container can be taken off.

Apply the hand brake.

Remove hub cap with puller and jack bar by hooking the puller into the holes in the edge of the cap and levering against the wheel rim with the jack bar.

Loosen all wheel bolts about one turn with socket wrench and bar.





Insert jack into socket and push the jack tube down until it touches the ground.

Place bar in **upper link** -A- of jack and **raise** vehicle by pumping handle up and down.

Unscrew wheel bolts and take wheel off.

Place spare wheel against drum and raise or lower vehicle until a hole in the wheel is roughly in line with a threaded hole.

Insert a bolt and tighten it until the wheel can be swung around to align the other holes.



Insert remaining bolts.

Tighten bolts until the wheel, centered by the spherical shape of the bolt heads, contacts evenly all round.

Place bar in **lower link** -B- of jack and **lower** the vehicle by pumping handle up and down.

Insert bar into wrench and **tighten** the wheel bolts diagonally at 110 ft. lbs. Have it checked at a service station with a torque wrench because correct tightness of the wheel bolts is important for safety.



Install hub cap with a blow of the hand.

Be sure to check the pressure in the tire you have just put on. For correct tire pressure see page 49.

## Adjusting or replacing the fan belt

The fan belt tension is correct when the belt can be pressed inward about .6 in. at the center. The belt must not be too tight or too slack. A new belt may stretch slightly at first so it should be checked after about 600 miles and the tension corrected if necessary.

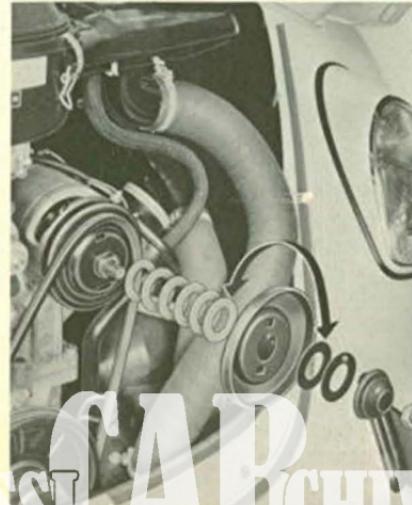
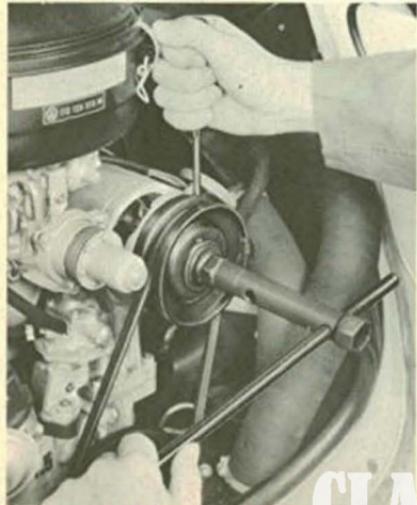
To adjust the belt, remove the rear part of the pulley on the generator. When loosening and tightening the nut, place a screwdriver in the slot in the front half of pulley and support the screwdriver against the upper screw in the

generator housing. To fit a new belt, the cover plate for the crankshaft pulley must also be removed after taking out the three screws.

The belt is tensioned by varying the number of washers between the pulley halves. Taking washers out increases the tension, putting them in decreases it.

### Hint:

Although the life expectancy of the fan belt of your VW is very high, you should always carry a replacement belt in the car.



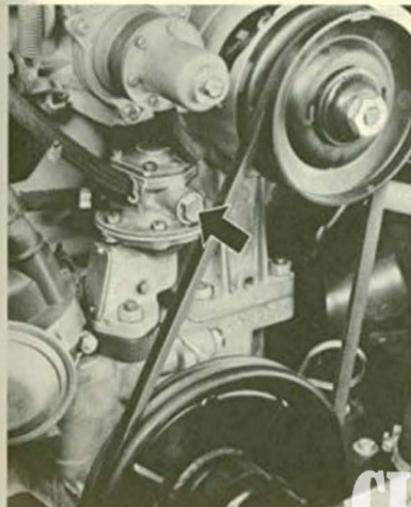
## Cleaning fuel pump filter

Remove plug and take filter out.

Reinstall plug immediately to prevent fuel leakage.

Wash filter in clean benzine and blow it out.

When installing the filter, ensure that the washer for the plug is located properly.



## Removing and installing spark plugs

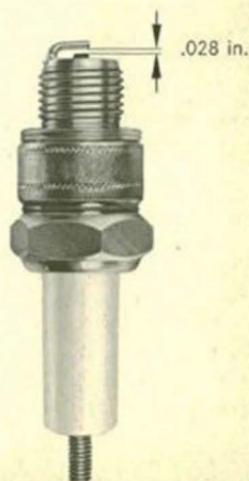
Pull connector off.

Screw plug out with socket wrench and bar.

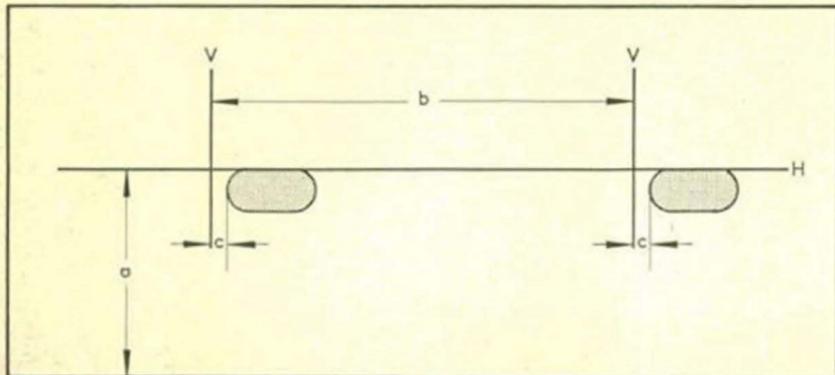
Dirty plugs should be cleaned with a sand blaster but in an emergency, the carbon can be removed with a chip of wood. Do not use a wire brush. The plugs should also be clean and dry on the outside as well in order to avoid shorting and tracking. The gap can be set by bending the outside electrode. The gap should normally be .028 in., but when the weather is very cold it can be reduced to .020 in. temporarily to facilitate starting.

Take care not to crossthread the plugs when inserting them, and tighten them firmly, but not overtight.

New plugs should be fitted every 12,000 miles.



CLASSIC CAR ARCHIVE



a = Height of headlamp center from floor  
 b = Distance between headlamps (41.1 in.)  
 c = 2 in.

## Headlight adjustment

It is best to check the headlight alignment with a regulation screen or aiming device. If none is available, proceed as follows:

Adjust tires to correct pressures and park vehicle on level surface squarely facing a wall or screen 25 feet in front of the headlights. The driver's seat must be loaded with one person or a weight of 154 lbs.

Measure height (a) of center of headlights from ground and draw a horizontal line (H) on screen at this height the full width of the vehicle.

Opposite the center of each headlight, draw vertical lines (V) intersecting the horizontal. These lines should be 41.1 in. apart. Drawing

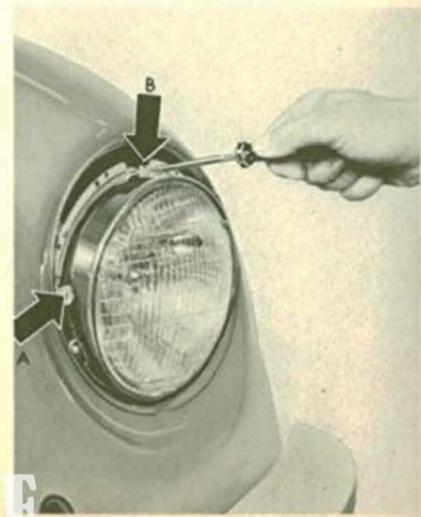
a vertical line for the center of the vehicle might help aligning vehicle with screen.

Loosen the screw in the center below the headlight and take the trim ring off.

Aim the headlights individually by turning the two aiming screws with low beams switched on. Cover up the second headlight.

The headlights are correctly aimed when the top edge of the high intensity zone is on the horizontal line H and the left edge is 2 in. to the right of the vertical line V.

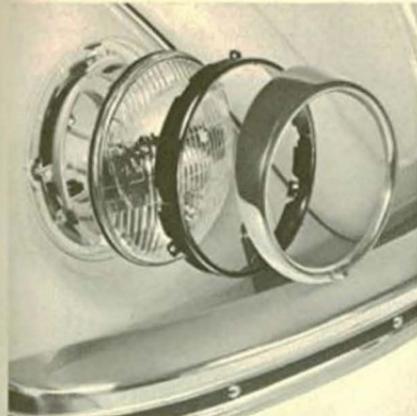
Check with your State Bureau of Motor Vehicles for variations from these dimensions.



A → Lateral aim

B → Vertical aim

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## Bulb replacement

### Sealed-Beam

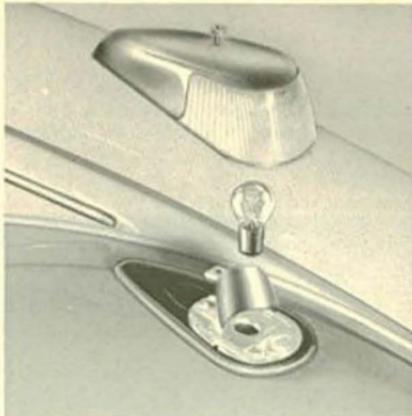
A double filament, type 2, seven inch sealed-beam unit of domestic manufacture is used in your Volkswagen. Should it become necessary to replace the unit, loosen screw in the center below the headlight and take the trim ring off.

Remove three screws in sealed-beam retaining ring and take ring off.

Take sealed-beam unit out of support ring and pull cable connector off.

When installing new sealed-beam units, ensure that the three glass lugs engage properly in the support ring.

Check headlight settings.



### Front turn signal and parking light bulb

Remove Phillips screw.

Take housing and lens off.

Press bulb into holder lightly, turn and take out.

Install new bulb.

When inserting the bulb, the lower retaining pin should face to the rear of the vehicle. When fitting housing, ensure that gasket is located properly.



### Rear turn signal, stop and tail light, back-up light bulbs

Unscrew three Phillips screws so that the lens can be taken off.

Bulb positions:

Top – turn signal

Center – stop and tail light

Bottom – back-up light

Press bulb lightly into holder, turn and take out.

Install new bulb.

Tighten lens securing screws evenly but do not overtighten.



### License plate light bulb

Open rear hood.

Remove screws on each side of lens and take off lens with bulb holder.

Pull bulb holder out of lens.

Press bulb lightly into holder, turn and take out.

Install new bulb.

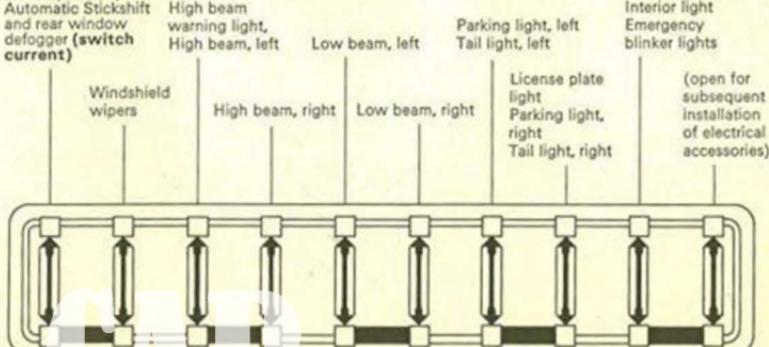
When installing, ensure that the cable grommet fits properly.

### Bulb Chart

	U.S. Replace- ment bulbs	VW Part Number
Headlights . . . . .	6012	111941261 A
Front park/turn, tail/stop . . . . .	1034	N 177382
Rear turn signal . . . . .	1073	N 177322
License . . . . .	89	N 177192
Back-up lights . . . . .	1073	N 177332
Instrument and warning lights . . . . .	—	N 177222
Interior light: Sedan . . . . .	—	N 177232
Convertible . . . . .	—	N 177252
Warning lights for emergency blinker, brake operation, rear window defogger and Automatic Stickshift . . . . .	—	N 177512

### Fuse box

Turn signals, Horn,  
Stop lights,  
Warning lights for  
brake operation,  
Automatic Stickshift  
and rear window  
defogger (switch  
current)



Another 3 amp fuse in a separate fuse holder on the left underneath the rear seat is for the main current of the rear window defogger.

## Replacing fuses

The fuse box which has a transparent cover is located under the instrument panel near the steering column.

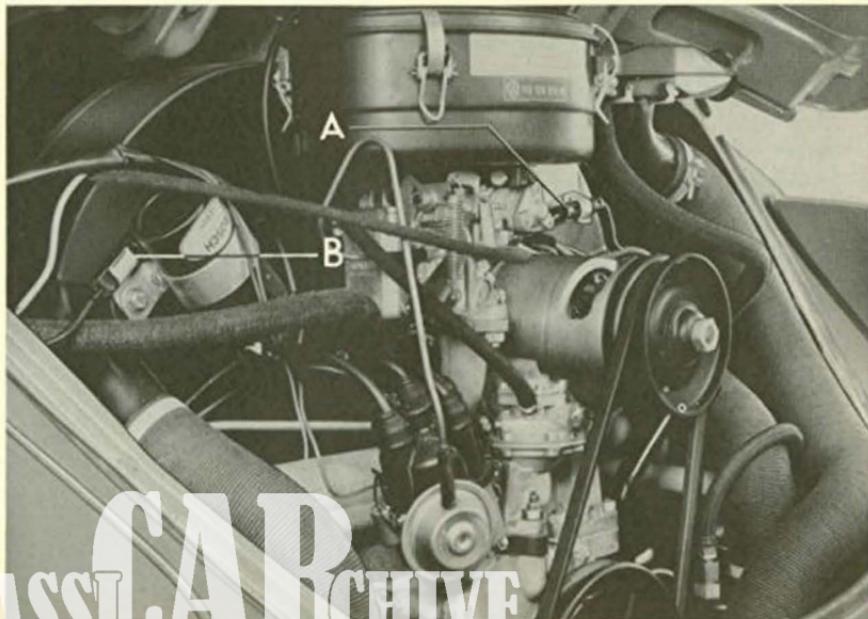
When a fuse blows, it is not sufficient to merely replace it with a new fuse. The cause of the short circuit or overload must be established. On no account should fuses be patched with tinfoil or wire as this can cause serious damage

elsewhere in the system. It is advisable to always carry a few spare 8 ampere fuses in the vehicle.

Two additional fuses are located on the fan housing in the engine compartment:

The 8 Amp. fuse in the holder (A) located above the generator protects the back-up lights.

There is an additional 8 Amp. fuse (B) above the ignition coil for the control valve of the Automatic Stickshift. If this fuse should ever burn out, the transmission cannot be shifted.



CLASSIC CAR ARCHIVE

## Checking battery

The ability of the engine to start readily depends to a great extent on the condition of the battery. For this reason the battery should be checked regularly and given a certain amount of attention.

When the rear seat is lifted, the filler plugs can be removed from the battery. The electrolyte level should always be just above the plate tops. If the level is too low, add distilled water.

### Attention

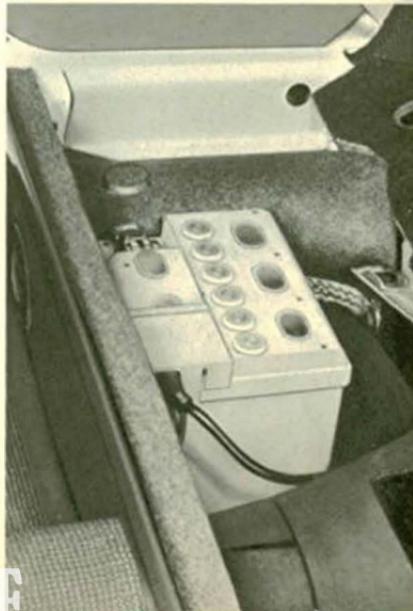
When working on the battery, take care not to short circuit the terminals. This would cause the battery to heat up very quickly which could lead to damage.

The electrolyte level drops when the battery is charged due to the dissociation of the water used to dilute the electrolyte and to a lesser extent, to evaporation. How often the battery has to be topped up depends mainly on operating conditions and indirectly on the time of year. When a vehicle is often driven long distances in the daytime with hardly any current being used, the battery will have to be topped up with distilled water much more often than in the case of a vehicle which is operated under different conditions. As a general rule, the battery electrolyte level must be checked more often in the summer than in the winter. VW drivers in hot countries who do a lot of driving are advised to check the battery at least once a week.

Do not put in more distilled water than is necessary because if the level is too high, the electrolyte will overflow when the battery is being charged and cause damage.

The terminals and connections should be kept clean and greased with battery terminal grease. Ensure that the ground connection to the body is free of corrosion and tight.

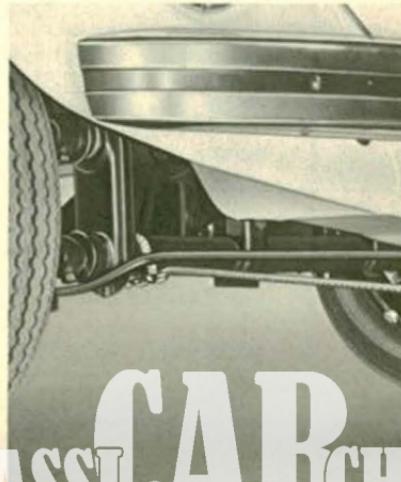
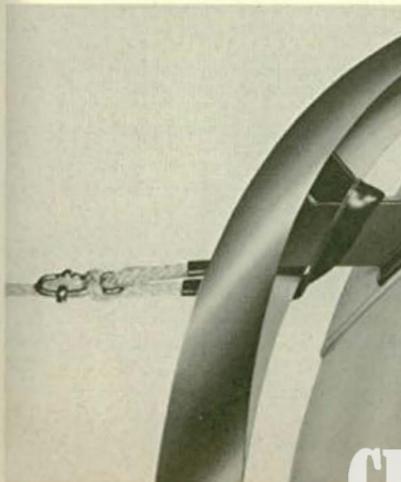
If you store your vehicle for a prolonged period, it is advisable to take the battery to an Authorized Volkswagen dealer. A battery which is not in constant use will discharge itself in time and this can cause permanent damage to the plates if the battery is not checked about every four weeks and charged as necessary.



## Towing

At the rear, a towing rope can be attached to the bumper support provided that no undue stress will be applied and that no jerking movements will occur. When towing off the road, it is possible that undue stress will cause damage to the body.

The driver of the vehicle that is pulling must be particularly careful when starting off and shifting. The driver of the vehicle that is being pulled must take care to keep the tow rope taut.



At the front, the rope should be attached to the lower axle tube as near to the frame head as possible.

On page 21 you will find hints to observe when towing with the VW Automatic Stickshift.

CLASSIC CAR ARCHIVE

## Here is what to do when trouble troubles you

Your Volkswagen should repay you with trouble free driving if it receives regular maintenance.

Should you ever encounter difficulty in starting your engine or have trouble on the road, there are a few simple repairs which you can make to get your VW going again. Locate the problem and probable cause of your trouble in the guide on the following pages and follow the directions on what to do.

If the trouble is serious or you are uncertain as to its origin, be sure to see an Authorized Volkswagen Dealer as soon as possible.

**Note: The adjustment of idling, ignition timing and – on vehicles with four speed synchromesh transmission – throttle positioner requires special equipment and training. We suggest that you consult your Authorized Volkswagen Dealer.**

Problem	Probable Cause	What To Do
VW will not start: engine will not turn over or turns over too slowly	1. Run down or dead battery  2. Loose connection A. At battery B. At starter C. At connections behind dash board  3. Starter defective  4. On vehicles with Automatic Stickshift: The gear shift lever is not in Neutral	1. A. Four speed synchromesh transmission: Push to start the vehicle (turn on ignition, put in third gear at a speed of approximately 20 mph. Release clutch slowly). Have battery charged and cause of high current consumption checked. B. Automatic Stickshift: Push to start the vehicle (turn on ignition, shift into driving range L. When towing or pushing, the engine should start at a minimum speed of 15 mph.). Have battery charged and cause of high current consumption checked.  2. Make sure that all connections are tight A. Check both cable connections on battery and grounded end of ground strap B. Check connections at solenoid, mounted on starter, under right rear of vehicle C. Check push-on connectors behind dash board  3. Have vehicle started by pushing (see paragraph 1) and take it to nearest Authorized VW Dealer  4. Shift to Neutral
VW will not start: engine turns over	5. Loose connection in ignition system  6. Loose connection in primary circuit to coil  7. If spark at black coil cable, trouble is in ignition system	5. Check for loose connections at coil, distributor and spark plugs  6. Turn on ignition. Remove thin black cable from ignition coil, hold it by insulation and strike it against blower housing or other ground, <b>being careful of gasoline and its fumes</b> . If no spark, electricity does not reach coil from battery. Check push-on connectors behind dash board. If still no spark, see the nearest Authorized VW Dealer.  7. Check in this sequence: A. Turn on ignition, remove distributor cap, and turn engine by fan belt until the ignition points are <i>closed</i> . Open and close ignition points several times with a nonmetal object. A visible and audible spark will appear between the points. If this is not the case, the cables on ignition coil and distributor should be checked for tightness. If no spark is visible, see your nearest Authorized VW Dealer.  B. If spark appears at points, remove high tension wire from center of distributor cap and hold it against a <i>metal</i> part of the engine at a distance of approximately $\frac{1}{4}$ ". Switch on ignition and turn over engine or open ignition points as described under A. A strong blue spark must appear. If this is not the case, see your Authorized VW Dealer.

Problem	Probable Cause	What To Do
VW will not start: engine turns over	<p>8. If spark is fairly good at plugs, trouble is most likely in fuel system</p> <p>A. Caused by improper starting procedure. If the gas pedal is depressed too often, the accelerator pump in the carburetor injects too much gasoline</p> <p>B. Carburetor may be flooded, float or needle valve may be sticking</p>	<p>C. If a spark appears at high tension cable, the distributor cap should be cleaned inside and outside. Reconnect high tension cable. Remove all spark plugs. If plugs are clean and dry, reconnect ignition cables to spark plugs and bring spark plugs in connection with metal (ground). <b>Hold cable with dry piece of cloth to avoid shock.</b> A spark should appear between spark plug electrodes when the engine is turned over. If not, clean and dry ignition cables and spark plug connectors and check that ignition cables are tight in distributor cap and plug connectors. See your Authorized VW Dealer if the above steps did not ensure proper ignition</p> <p>D. Dirty or wet spark plugs should be cleaned and dried. Install new plugs if necessary. Unburned gasoline on plug electrodes points to excessive fuel supply.</p> <p>8. Check fuel system in the following sequence:</p> <p>A. Depress gas pedal completely and operate starter for a prolonged period. If engine does not start, remove and dry spark plugs, turn over engine with plugs removed for approximately 30 seconds. Reinstall plugs and start engine</p> <p>B. Tap around outside of carburetor with wooden or plastic tool handle. Wait a few minutes and try starting again as described at 8 A.</p>
Engine stalls shortly after starting	<p>9. Poor fuel supply</p> <p>10. Automatic choke does not open, excessive fuel supply</p>	<p>9. See paragraph 12 through 14</p> <p>10. Check whether choke valve is in vertical position after ignition has been switched on for 2-5 minutes (depending on outside temperatures). Cover for choke unit must be hot. If choke valve is binding in a closed position open at fast idle cam and, if necessary, retain with wire. See your Authorized VW Dealer</p>
Engine stalls while vehicle is driven	<p>11. Defect in ignition system</p> <p>12. Fuel supply is exhausted</p> <p>13. Fuel pump filter may be clogged</p> <p>14. Gasoline may be contaminated by water, dust or dirt</p>	<p>11. See paragraph 5 through 7</p> <p>12. Check whether any gasoline is left in tank</p> <p>13. After removing the screw plug, the fuel filter can be taken out for cleaning</p> <p>14. See your VW dealer for cleaning of all components of the fuel system</p>
Green warning light comes on while you are driving	15. If green light goes on, the oil pressure is too low	15. Stop at once and check oil level. Add oil as necessary. If the oil level is sufficient and green light goes on during driving, contact the nearest Authorized VW Dealer before driving on
Red warning light comes on while you are driving	16. If red light goes on, V belt may be torn or generator does not charge	16. If belt drives generator without slipping, switch off all unnecessary electrical equipment (radio, etc.). Drive to nearest VW dealer as otherwise the battery will soon get run down. If belt is broken, replace it before driving on because engine cooling fan is no longer working
Vehicles with Automatic Stickshift: Lever cannot be shifted	17. Control valve fuse burned out	17. Replace fuse (see page 35). Check cable connections on control valve located on the left in the engine compartment

## Proper lubrication . . .

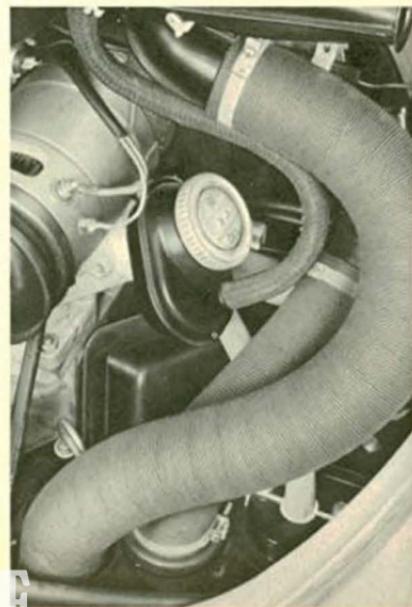
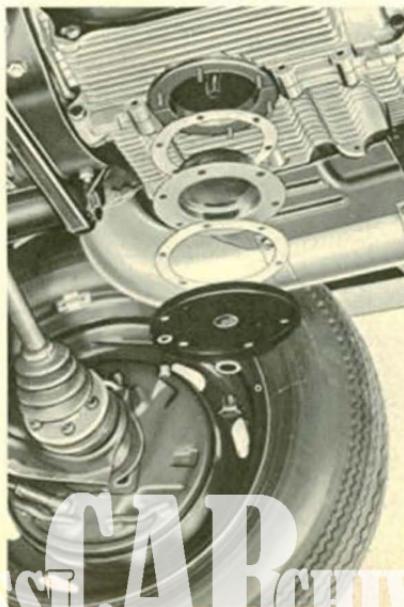
means regular and careful lubrication. Page 54 shows you at which intervals the various points require attention.

### Engine

Regular oil changes are necessary even if the very best brand of oil is used because dirty oil in the engine means increased wear, and reduces service life.

The oil is drained, when warm, by removing the plug in the oil strainer cover plate. Flushing is not necessary but the strainer must be removed and cleaned at every oil change. The gaskets and the copper washers under the cap nuts must always be renewed. The engine is then filled with 5.3 US pints of HD oil (4.4 Imp. pints) — labeled "For Service MS".

Due to the detergent properties of HD oil, the fresh oil will look very dark after the vehicle has been running for only a short time. This need not worry you and under normal operating conditions there is no reason whatever to change the oil at shorter intervals than every 3000 miles. We only recommend more frequent oil changes — every 1500 miles — in the winter if you drive mostly short distances and in city traffic. If you only drive a few hundred miles a month under these conditions, it is advisable to have the oil changed every 6 to 8 weeks. In countries with arctic climates where average temperatures are about —13° F the oil should be changed every 750 miles.



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## Some more information about oil

Always use a branded HD oil labeled "For Service MS" for the engine of your Volkswagen. The quality of oil produced by reputable firms is so good that the choice of brand is entirely up to you. The Volkswagen engine makes no special demands in respect to oil quality which cannot be met by the well-known and popular brands. It is suggested that you select "your" brand of oil at the first oil change at 600 miles and that you stick to this brand if possible.

The classification of oil into various viscosity grades is shown by the designations SAE 30, SAE 20 W/20 and so on. The viscosity of a lubricant indicates its resistance to flow at a given temperature. The VW engine usually requires only two different viscosity grades which are used, according to season of year, as follows:

SAE 30 In warm seasons and all year round in countries with hot climates.

SAE 20 W/20 In the winter.

or  
SAE 10 W\*) In areas where the average temperature is below 5° F

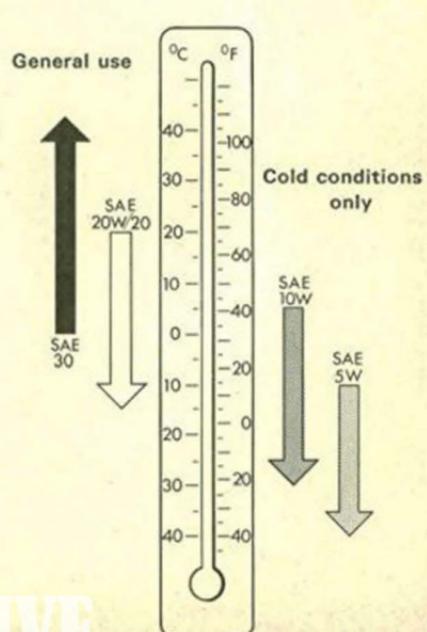
SAE 5 W\*) In countries with arctic climates and temperatures below -13° F

\*) Avoid driving at high speeds for long periods if using SAE 10 W oil and the outside temperature is above 32° F or if using SAE 5 W oil when the temperature is above 5° F.

All SAE grades cover a temperature range of about 60° F and the ranges of two neighboring grades overlap by at least 30° F. Brief variations in temperature between seasons can therefore be disregarded. For the same reason, it is also alright to mix oils of different viscosities when oil has to be added between oil changes and the viscosity of the oil in the engine no longer corresponds to the actual temperature.

No additives of any sort should be mixed with HD oil.

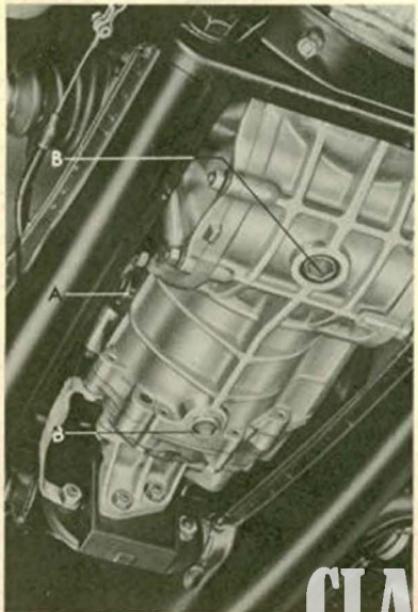
## Temperature ranges of SAE grades



## Transmission

Transmission and final drive are combined in one housing and both lubricated with the same **hypoid** oil. The oil should be up to the edge of the filler hole (A).

At oil changes every 30000 miles, the old oil should be drained when warm. The magnetic oil drain plugs – two on the four speed syn-



chromesh transmission (both B) and one only on Automatic Stickshift (C) – must be cleaned carefully. On vehicles with Automatic Stickshift, additionally the transmission oil pan has to be removed and the oil pan gasket must be replaced. Fill up 5.3 US pints on four speed synchromesh transmission and 6.3 US pints on Automatic Stickshift of quality SAE 90 hypoid oil. Only in countries with artic climates is it necessary to use the thinner SAE 80 transmission oil.

The oil sometimes runs into the transmission housing very slowly. If one attempts to put the oil in too quickly, it may overflow and give the impression that the housing is already full although actually only about 2–3 pints have been put in. It is essential to the service life and silent running of the transmission that the correct amount of oil is used.

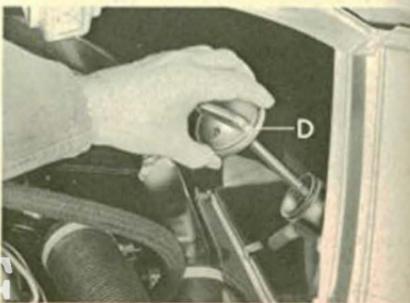
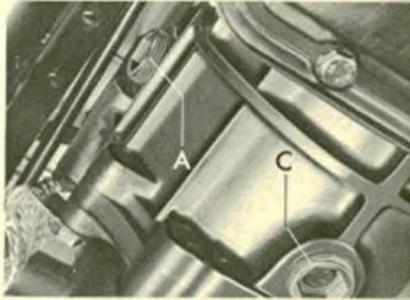
The oil level in the transmission should be checked every 6000 miles. At the same time the transmission should be checked for leaks and, on vehicles with Automatic Stickshift, additionally the mounting bolts of the transmission oil pan have to be checked for tightness.

### Additives should not be used with hypoid oil.

On vehicles with Automatic Stickshift, additionally the ATF level in the torque converter should be checked every 6,000 miles with engine switched off.

An ATF tank filler (D) with a dipstick attached

to its cover is provided for this purpose on the right side in the engine compartment. The fluid level should be kept between the two marks on the dipstick and should never fall below the lower mark. If necessary, fill up with automatic transmission fluid and check for leaks.



It is imperative that only those ATF's be used which show on the container the following designations:

- 1) Brand name
- 2) "DEXRON R"
- 3) 5 digit number preceded by the letter "B"

**Note:** Additives must not be used with ATF.

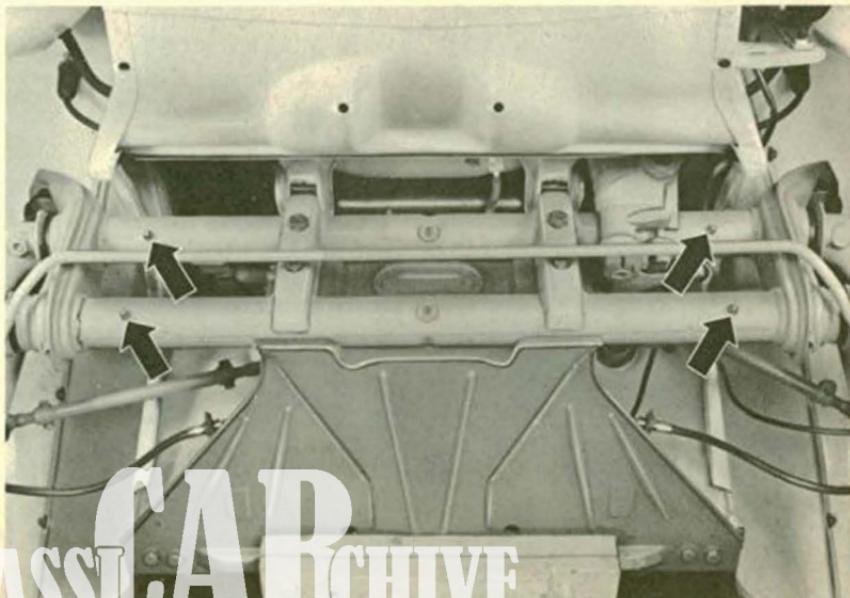
### Front axle

**The front axle can only be lubricated properly when the axle is free of load, that is with the front end lifted and the wheels hanging free.**

There are four nipples on the axle tubes which must be lubricated with a lithium-based multi-purpose grease. The nipples and the grease gun nozzle should be cleaned carefully before greasing commences. Place gun on nipples and inject grease until fresh grease starts to come out at the torsion arm sealing rings.

Grease and oil must not be left on tires and brake hoses for long periods. Even small traces should be wiped off immediately.

If the vehicle is driven less than 6000 miles per year, the front axle must be lubricated once a year.



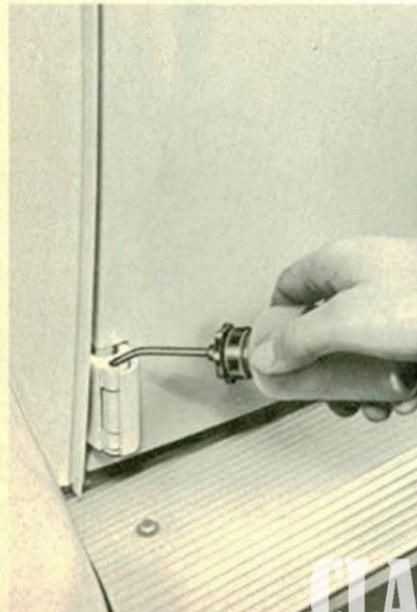
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## Doors and hoods

The plastic plug on top of the hinge pin closes an oil pocket. Check the oil supply every three months by removing the plug with a screw driver. If necessary, the oil pocket should be refilled with SAE 30 engine oil. Press plug in and wipe off excess oil with a cloth.

The door and hood locks and the hood hinges should be lubricated at the same intervals. The door lock should be given a few drops of engine oil through a hole in the edge of the door which is normally sealed with a plug. The hood hinges are also oiled and the hood locks

lightly lubricated. Surplus oil on the hood hinges should be wiped off. The lock cylinder is treated with graphite as necessary. The key can be dipped into the graphite and then turned in the lock a few times. The friction surfaces of the striker plates should be lubed lightly.



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## Oil bath air cleaner

A dirty cleaner element not only reduces the engine output, it can also cause premature engine wear. If local conditions are such that the vehicle is often driven on very dusty roads, the cleaner must be checked frequently, even daily if necessary.

The dust present in the air drawn in by the engine is retained by the filter element in the upper part of the air cleaner and washed out when the vehicle is in motion, by the oil in the lower part. In time, this causes a layer of sludge to form at the bottom of the lower part. When there is only  $\frac{3}{16}$  in. of oil above the sludge layer, the lower part must be cleaned and filled with fresh oil.

The cleaner must be removed to do this:



Pull crankcase ventilation hose -A- off the air cleaner.

Loosen clip -B- on hose for preheated intake air and pull hose off connection on air cleaner.

Remove retaining clamp -C- of cable for warm air control flap and disconnect cable.

Loosen screw -D- on outer cable retainer and pull cable out.

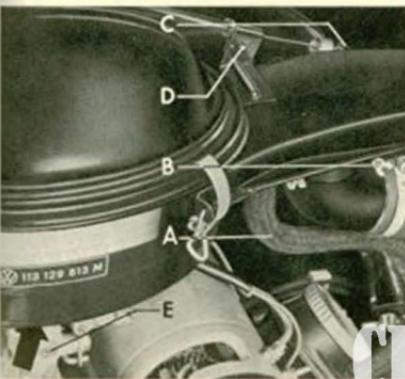
Loosen screw -E- in air cleaner support bracket.

Loosen air cleaner clamp screw -arrow- and take cleaner off carburetor.

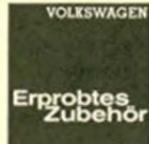
Release the clips and take top part off. The top part must not be laid down with the filter element upward.

Clean bottom part carefully and fill to mark with fresh engine oil. Oil viscosity: SAE 30 all the year. In countries with arctic climates only, SAE 10 W should be used all the year.

Check that the flaps in the intake pipe on the top part of the cleaner move easily. The top part does not normally need cleaning. Only if the filter element has become so dirty due to delayed cleaning of the bottom part or oil shortage that the air inlet holes on the underside are partly blocked, the encrusted dirt should be scraped off with a piece of wood.



When installing the cleaner, ensure that the space between the intake pipe and the fan housing is uniform so that the screw of the air cleaner support bracket can be inserted. Tighten the clamp screw carefully but do not overtighten. To reconnect the cable for the warm air control flap in the intake pipe push the outer cable into the retainer, as far as it will go. After fixing the screw -D- attach the end of the inner cable with the clamp -C- to the lever of the right flap.



Approved Accessories  
Accessoires Agréés  
Accessori Approvati  
Accesorios Aprobados  
Utprovade Tillbehör  
Acessórios Aprovados  
Beproefde Accessoires

GENUINE VW PARTS are the proper replacement parts for the Volkswagen. They guarantee accuracy, quality and reliability. Every part of the Volkswagen is available as a Genuine VW Part and all are naturally of the same high quality as the original parts on the vehicle when it leaves the factory. The genuine parts are expertly installed at any Authorized Volkswagen Dealership.

VW EXCHANGE PARTS are also replacement parts for your Volkswagen just like the Genuine VW Parts. They are covered by the same Warranty conditions as Genuine VW Parts and are available in every VW Dealership. But there is one difference: The price. VW Exchange Parts are less expensive than Genuine VW Parts but exactly the same quality. The exchange parts are not new parts, but parts which have been reconditioned in the Volkswagen factory. That is why you have to hand in the old repairable part to get an exchange part.

APPROVED VOLKSWAGEN ACCESSORIES are not just any old accessories. They have either been designed especially for the Volkswagen or selected from the vast range of accessories available and tested for use on the Volkswagen in the Volkswagen factory. The trademark "Approved Accessories" is your guarantee for material quality, good workmanship and reliability.

Approved VW accessories are supplied by your Authorized VW Dealer who will also install them for you if necessary. You can fit many of the accessories yourself.

Genuine Volkswagen parts, new and rebuilt, and approved Volkswagen accessories are covered by a warranty guaranteeing them to be free of defects in material and workmanship for a period of 6 months or 6,000 miles whichever comes first.

Please consult your Authorized Volkswagen Dealer on all questions concerning repairs. He will be pleased to advise you and your vehicle will be in good hands.

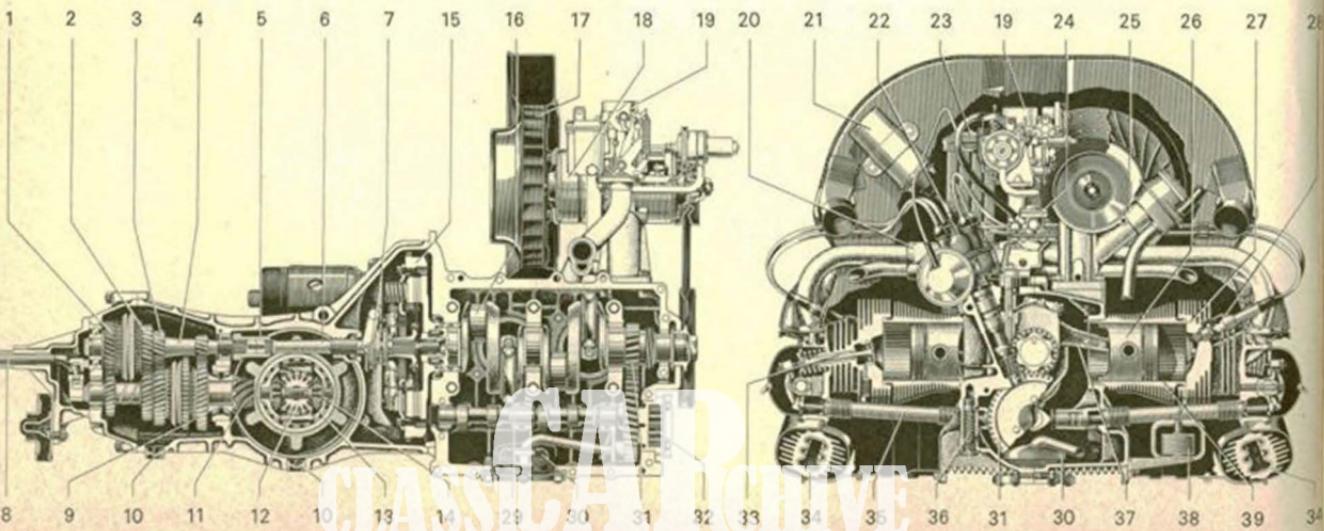
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## Engine with four speed synchromesh transmission

1 – 4th speed gears  
 2 – 3rd speed gears  
 3 – 2nd speed gears  
 4 – Main drive shaft, front  
 5 – Reverse gear  
 6 – Main drive shaft, rear  
 7 – Clutch release bearing  
 8 – Transmission shift lever  
 9 – 1st speed gears  
 10 – Oil drain plugs  
 11 – Drive pinion  
 12 – Differential side gear  
 13 – Differential housing

14 – Differential pinion  
 15 – Flywheel  
 16 – Crankshaft  
 17 – Fan  
 18 – Generator  
 19 – Carburetor with throttle  
 positioner  
 20 – Intake manifold  
 21 – Ignition coil  
 22 – Distributor  
 23 – Oil cooler  
 24 – Fuel pump  
 25 – Oil filler and breather  
 26 – Piston  
 27 – Cylinder head  
 28 – Spark plug  
 29 – Camshaft  
 30 – Oil strainer  
 31 – Camshaft drive gears  
 32 – Oil pump  
 33 – Valve  
 34 – Heat exchanger  
 35 – Push rod tube  
 36 – Oil pressure relief valve  
 37 – Connecting rod  
 38 – Thermostat  
 39 – Cylinder



## Chassis

Platform frame with tunnel-shaped center member				
Front axle bolted to frame head, engine/transmission unit bolted to frame fork				
Independent wheel suspension: twin cranked link arms at front, trailing arms and diagonal links at rear				
Torsion bar springing, telescopic shock absorbers, stabilizer at front				
Roller steering with maintenance free tie-rods and hydraulic steering damper				
Hydraulic dual-circuit foot brakes				
Mechanical hand brake effective on rear wheels				
Wheelbase 94.5 in. (2400 mm)				
Turning circle diameter 36 ft. (11 m)				
Track at front 51.6 in. (1310 mm)				
Toe-in .08 to .18 in. (2 to 4.5 mm) unladen				
Camber 30°±20° unladen				
Track at rear 53.3 in. (1350 mm)				
Wheels 4 J × 15 safety rim wheels				
Tires, tubeless	Bias Ply Tires or 5.60-15 – load capacity 970 lbs. at 32 psi.	Radial Ply Tires 155 SR 15		
Tire pressures, cold	front	rear	front	rear
with 1 or 2 occupants	16 psi (1.1 kg/cm <sup>2</sup> )	24 psi (1.7 kg/cm <sup>2</sup> )	18 psi (1.3 kg/cm <sup>2</sup> )	27 psi (1.9 kg/cm <sup>2</sup> )
fully loaded	17 psi (1.2 kg/cm <sup>2</sup> )	26 psi (1.8 kg/cm <sup>2</sup> )	18 psi (1.3 kg/cm <sup>2</sup> )	27 psi (1.9 kg/cm <sup>2</sup> )
	For long, high speed trips, the tire pressures should be increased by 3 psi (0.2 kg/cm <sup>2</sup> ) at front and rear.			

## Electrical system

Voltage	12 volts
Battery	44 Ah
Starter	0.7 bhp
Generator	max. 360 watts, early cut in
Ignition distributor	with vacuum spark advance
Firing order	1-4-3-2
Basic ignition timing	TDC – engine at operating temperature
Contact breaker gap	.016 in. (0.4 mm)
Spark plugs	Bosch W 145 T 1 or plugs with Beru 145/14 similar values from other manufacturers

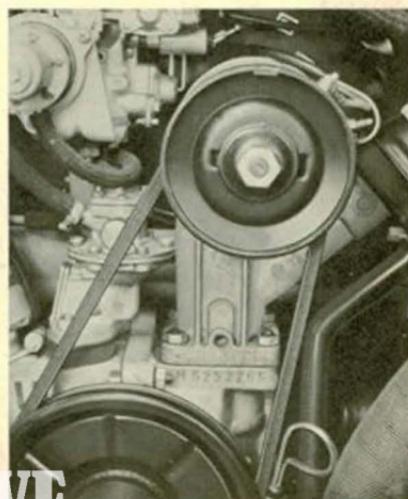
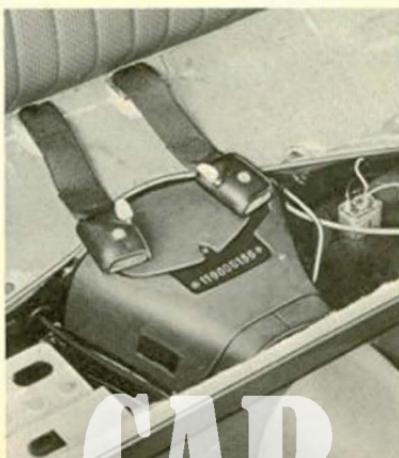
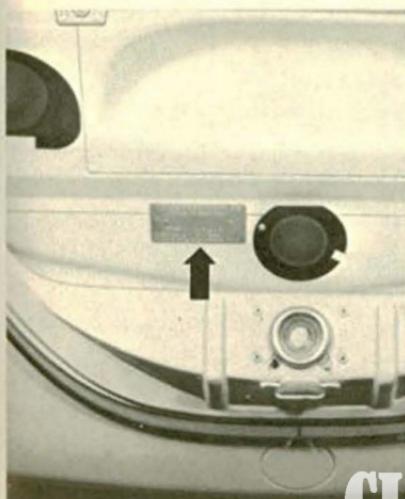
<b>Dimensions and weights</b>	Plug thread	14 mm	<b>Convertible</b>
	Plug gap	.028 in. (0.7 mm)	
	<b>Sedan</b>		
Length	158.6 in. (4030 mm)	158.6 in. (4030 mm)	
Width	61.0 in. (1550 mm)	61.0 in. (1550 mm)	
Height	59.1 in. (1500 mm)	59.1 in. (1500 mm)	
Ground clearance	5.9 in. (150 mm)	5.9 in. (150 mm)	
Unladen weight (ready for use)	1807 lbs. (820 kg)	1918 lbs. (870 kg)	
Permissible load	838 lbs. (380 kg)	794 lbs. (360 kg)	
Gross vehicle weight	2645 lbs. (1200 kg)	2712 lbs. (1230 kg)	
Permissible front axle load	1080 lbs. (490 kg)	1102 lbs. (500 kg)	
Permissible rear axle load	1609 lbs. (730 kg)	1631 lbs. (740 kg)	
Permissible roof and trailer weights			
Roof weights *)	110 lbs. (50 kg)	—	
Trailer without brakes	880 lbs. (400 kg)	880 lbs. (400 kg)	
*) Applies only to roof rack mounted to rain gutters. Distribute load evenly!			
<b>Capacities</b>			
Fuel tank	10.6 U.S. gallons (40 liters; 8.8 Imp. gallons)		
Engine	5.3 U.S. pints (2.5 liters; 4.4 Imp. pints)		
Transmission and final drive	5.3 U.S. pints (2.5 liters)		
On vehicles with Automatic Stickshift:			
Torque converter circuit approximately 7.6 U.S. pints ATF (3.6 liters; 6.3 Imp. pints)			
Transmission and final drive			
Brake system	approximately 6.3 U.S. pints Hypoid oil (3.0 liters; 5.3 Imp. pints)		
Oil bath air cleaner	approx. .53 U.S. pints (0.25 liter; 44 Imp. pints)		
Windshield washer	approx. .8 U.S. pints (0.4 liter)		
Maximum and cruising speed	approx. 3.6 U.S. pints (approx. 1.7 liters; 3 Imp. pints)		
Acceleration time from 0-50 mph. (0-80 kph.)	Four speed synchromesh transmission		
Climbing ability	78 mph. (125 kph.)		
1st gear	Automatic Stickshift		
2nd gear	74.5 mph. (120 kph.)		
3rd gear			
4th gear			
	approx. 13 seconds		
	Sedan Convertible		
	46% 45%		
	Driving range L 38% 36%		
	24% 23%		
	Driving range 1 23% 22%		
	13% 13%		
	Driving range 2 16% 15%		
	8% 8%		

**The Identification plate** is found under the front hood behind the spare tire. The 9 digit number after the words "Fahrgest. Nr." is the chassis number. It describes the model number, model year and serial number of the vehicle as shown in this sample:

11 9 000186  
Model Year Serial Number

**The Chassis Number** is also found on the frame tunnel under the rear seat.

**The Engine Number** is on the generator support flange.



CLASSIC CAR CHIVE

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# Lubrication and maintenance

## A. The free maintenance service at 600 miles - W 1 - consists of the following:\*

### Oil Change

- 1 - Engine: Change oil, clean oil strainer. Check for leaks.
- 2 - Transmission: Change oil, clean magnetic drain plugs. Check for leaks.
- 3 - Windshield washer: Check fluid.

### Maintenance Service

#### The Mechanic:

- 1 - Check slotted nut of both rear brake drums, tighten if necessary.
- 2 - Check V-belt, adjust if necessary.
- 3 - Check contact points, lubricate distributor.
- 4 - Check and adjust valve clearance.
- 5 - Check and adjust clutch pedal free-play (four speed synchromesh transmission only).
- 6 - Rear axle: Check torque of bolts for constant velocity joints.
- 7 - Drive shafts: Check boots for leaks.

- 8 - Check dust seals and proper fit of plug on ball joints. Check dust seals on tie rod ends. Check tie rods, tighten if necessary.
- 9 - Check tire pressures. Check wheel bolts, torque to factory specifications if necessary.
- 10 - Check brake system for damage and leaks, check brake fluid level, add if necessary. Adjust foot and hand brakes.
- 11 - Check operation of electrical system and headlight adjustment.

### The Service Adviser (Quality Control)

#### During roadtest:

Check efficiency of braking, steering, heating and ventilation systems. Check overall performance.

#### After roadtest:

Adjust ignition timing with stroboscopic light. Check and adjust idling. Check throttle positioner for correct functioning (four speed synchromesh transmission only). Check cylinder head covers for leaks.

\*Lubricants and fluids are paid by the customer.

## B. An oil change service every 3,000 miles - WS 5 - consists of:

- 1 - Engine: Change oil, clean oil strainer. Check for leaks.
- 2 - Door and hood locks, door hinges: Lubricate.
- 3 - Battery: Check, add distilled water if necessary, clean and grease terminals.
- 4 - Windshield washer: Check fluid.

## C. A lubrication and maintenance service every 6,000 miles - W10 - consists of:

### Lubrication Service

Perform WS 5 plus the following items:

- 5 - Transmission: Check oil level, add if necessary. Check for leaks.
- 6 - Front end: Lubricate.
- 7 - Air cleaner: Check, clean lower part if necessary and fill with fresh oil.

In addition, on vehicles with Automatic Stickshift:

- 8 - Check ATF level, fill up if necessary. Check torque converter circuit for leaks.
- 9 - Oil pan: Check bolts, tighten if necessary.

## Maintenance Service

### The Mechanic:

- 1 – Check V-belt, adjust if necessary.
- 2 – Check contact points, replace if necessary, lubricate distributor.
- 3 – Check and adjust valve clearance.
- 4 – Check spark plugs, check and adjust plug gap. Check compression.
- 5 – Check control flaps on oilbath air cleaner.
- 6 – Check rubber valve for crankcase ventilation, replace if necessary. Check exhaust system for damage.
- 7 – Check and adjust clutch pedal free-play (four speed synchromesh transmission only).
- 8 – Check dust seals and proper fit of plugs in ball joints. Check dust seals on tie rod ends. Check tie rods, tighten if necessary.
- 9 – Check axial play of ball joints.
- 10 – Check front wheel camber and toe-in.

11 – Steering gear: Check and adjust play between roller and worm.

12 – Check tires for wear and damage, check the tire pressures.

13 – Check brake system for damage and leaks, check brake fluid level, add if necessary. Adjust foot and hand brakes. Check operation of brake warning light.

14 – Check thickness of brake linings.

15 – Rear axle: Check torque of bolts for constant velocity joints.

16 – Drive shafts: Check boots for leaks.

17 – Check operation of electrical system and headlight adjustment.

18 – Check wiper blades and replace if necessary.

In addition, on vehicles with Automatic Stickshift:

19 – Servo clutch: Check clearance on clutch servo rod and adjust, if necessary.

20 – Control valve: Clean air filter.

21 – Shift lever: Check and clean contacts, replace if necessary. Adjust clearance.

### The Service Adviser (Quality Control)

#### During roadtest:

Check efficiency of braking, steering, heating and ventilation systems. Check overall performance.

#### After roadtest:

Adjust ignition timing with stroboscopic light. Check and adjust idling. Check throttle positioner for correct functioning (four speed synchromesh transmission only). Check cylinder head covers for leaks.

**D. In addition, every 30000 miles change the transmission oil (includes removing and installing oil pan on vehicles with Automatic Stickshift) - W 10. Repack front wheel bearings, clean and lubricate rear wheel bearings - W 51.**

**E. Every two years, replace brake fluid. Check functioning of brake warning light switch.**

# Maintenance Record

Maintenance is only a word. It covers many things. Proper maintenance guarantees the best economy, dependability, safety and convenience. All kinds of "maintenance" are available to you. Naturally, we believe that the best maintenance is obtainable from Authorized Volkswagen Dealers.

- 1 - You expect your Volkswagen to be reliable and economical and to last a long time, no matter how many miles you travel, how you drive or how bad the weather and roads are. This Maintenance Record in the Owner's Manual with its reminders for regular lubrications and maintenance services will help you achieve this.
- 2 - The empty spaces will tell you when oil changes, lubrications and maintenance services are due. These maintenance services keep your Volkswagen in good running condition, contribute to your safety and help retain your vehicle's value. The mileages printed in the spaces tell you at a glance when the next oil change, lubrication or maintenance service is due.
- 3 - Just hand this Owner's Manual to an Authorized Volkswagen Dealer - he will do the rest. The details are subject to alteration without notice.
- 4 - The first oil change and maintenance service at 600 miles and the oil change at 3,000 miles are particularly important for a long, trouble-free service life. The rear cover of this Owner's Manual contains a punchcard for the free-of-charge maintenance service at 600 miles.
- 5 - From 6,000 miles onward, the combined lubrication and maintenance service should be performed every 6,000 miles. Engine oil should be changed every 3,000 miles. If your Volkswagen is driven less than 3,000 miles in 3 months, have the oil changed every 3 months; if driven less than 6,000 miles in 12 months, have the front end lubricated once a year.
- 6 - Every Authorized Volkswagen Dealer at home or abroad guarantees to perform all the operations listed for maintenance and lubrication services in accordance with Volkswagen quality standards.

## Delivery Inspection

(Dealer Stamp)

Date

Miles

12 months

## WARRANTY VALIDATION

(Dealer Stamp)

Date

Miles

3000 miles

## WS 5 Oil change

(Dealer Stamp)

Brake Fluid Renewal and checking of brake warning light switch		
after 2 years of operation	after 4 years of operation	after 6 years of operation
(Dealer Stamp)	(Dealer Stamp)	(Dealer Stamp)
Date	Date	Date
Miles	Miles	Miles

600 miles W 1	
Engine and Transmission Oil change	Free Maintenance Service
(Dealer Stamp)	(Dealer Stamp)
Date	Date
Miles	Miles

<b>6000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>9000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>12000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>15000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>18000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>21000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)
Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____
<b>24000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>27000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>30000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>30000 miles</b> <b>W 51 Repack front and rear wheel bearings Transmission Oil change</b>  (Dealer Stamp)	<b>33000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>36000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)
Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____
<b>39000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>42000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>45000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>48000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>51000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>54000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)
Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____

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<b>57000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>60000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>60000 miles</b> <b>W 51 Repack front and rear wheel bearings Transmission Oil change</b>  (Dealer Stamp)	<b>63000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>66000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>69000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)
Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____
<b>72000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>75000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>78000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>81000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>84000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>87000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)
Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____
<b>90000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>90000 miles</b> <b>W 51 Repack front and rear wheel bearings Transmission Oil change</b>  (Dealer Stamp)	<b>93000 miles</b> <b>WS 5 Oil change</b>  (Dealer Stamp)	<b>96000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	<b>100000 miles</b> <b>W 10 Lubrication and Maintenance Service</b>  (Dealer Stamp)	
Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	Date _____ Miles _____	

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